The Milroy Lectures
ON
CHANGES OF TYPE IN EPIDEMIC DISEASES.

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BY B. A. WHITELEGGE, M.D., B.SC. LOND.

LECTURE II.

Diseases of more Stable Type.—Evidence of Gradual Change.—Scarlet Fever.—Small-pox.—Measles.

MR. PRESIDENT AND GENTLEMEN,—It has long been recognised that scarlet fever changes greatly in character, and that while some epidemics are mild others are severe. In Sydenham's time it was persistently mild. In Dublin, from 1804 to 1834, the epidemics of scarlet fever were of a non-fatal type, but after as well as before this period they assumed a malignant form. In New York the scarlet fever death-rate, after being low for thirty years, suddenly increased tenfold in 1828-29, and remained high for sixteen years. Very many instances of this kind are on record, but nevertheless they are exceptional, and as a rule the changes in type, which are neither rare nor unimportant, are of slower and more orderly character. The scarlet fever death-rate in London for the last fifty years presents many points of interest. At intervals of about five or six years wave after wave of high mortality is seen alternating with depressions corresponding to years of low mortality. The rise and fall are gradual, a maximum in one year being rarely followed by a minimum in the next. This at once suggests that the variable factor, whether prevalence or severity, is not capricious in action, but rises by degrees to a maximum, and then falls by similar degrees to a minimum, usually to rise again as before. But there is a further point. There are indications of a tide in the series of waves; the highest mark was reached in the "sixties," and since that time the successive crests have been lower and lower. During the last ten years the mortality has been persistently low, and the orderly sequence of epidemics is scarcely traceable. Presently we shall see that the average case mortality rose and fell with the recorded death-rate, so that the type was most severe when the recorded mortality was highest. A study of the records of other parts of the kingdom shows that whilst an interval of five or six years is by far the most usual, it is by no means universal, or even constant, in the same locality. The course of scarlet fever mortality for England, as a whole, is very similar to that of London. In the "sixties" there were bold waves of high mortality, subsiding gradually into a comparatively even course in the "eighties," with low death-rates. It seems, therefore, that, under the conditions then prevailing, most parts of the country must have suffered from scarlet fever, not only at similar intervals, but in the same years. As the average mortality grew less in the "seventies" and "eighties," the irregularities became more prominent in the curve for England than in that for London. The outbreaks in different parts of the kingdom became less synchronous. Many local records show little tendency to rhythm; others a well-marked succession of waves, with occasional irregularities. Nearly all exhibit the same decline in the last decade, with a tendency to lengthening of the interval and more or less complete loss of rhythm. At Bristol epidemics occurred in 1863, 1870, 1875, 1880 and 1887; the loss of life being less and less at each outbreak, and least of all, therefore, after the longest interval. At Swansea the intervals were five, five, six and nine years, and again the least destructive epidemic followed the longest interval, so that accumulation of susceptible persons can scarcely have been the principal influence at work. In Wolverhampton and Sheffield a four-year interval seems to have prevailed. Mortality records, therefore, teach that scarlet fever is a declining disease, and that with its decline there is a tendency to localisation, lengthening, lowering, and even disappearance of the epidemic waves.

We have next to inquire whether the alternations of high and low mortality were due to changing prevalence, changing severity, or both. The records of notification towns prove that the case mortality fluctuates in a very remarkable way. At Nottingham notification began in 1882 after a severe epidemic which reached its height in 1881. The record is not long enough to show how the case mortality curve would run at the outset of a fresh epidemic, but it does show that with the decline of mortality there has been a decline in the average severity of attack. From 1858 to 1882 epidemics occurred at the usual interval of five or six years, but since 1882 there has been no year of high mortality and the epidemic rhythm has abruptly ceased. These changes have been accompanied by a uniformly mild and non-fatal type of disease, although the prevalence has in some years been considerable. The Christiania records of cases and deaths are given by Johannessen for the years 1863 to 1878:—

*Table of Cases and Deaths from Scarlet Fever in Christiania from 1863 to 1878.**

Year.	Attacks.	Deaths.	Case mortality.
1863	216	47	21·8
1864	28	1	3·6
1865	21	1	4·8
1866	171	19	11·1
1867	705	159	22·6
1868	228	68	29·8
1869	287	36	12·6
1870	896	70	7·8
1871	244	24	9·8
1872	24	2	8·3
1873	29	3	7·7
1874	115	12	10·4
1875	1030	156	15·1
1876	1111	241	21·7
1877	214	62	29·0
1878	162	33	20·4

* Johannessen: Die Epidemische Verbreitung des Scharlachfiebers in Norwegen.

The mortality curve ran high in 1867 and 1875-76, with minor elevations in 1863 and 1870. The attack curve is irregular. There was great prevalence in 1867 and 1865-66, as would be inferred from the death curve, but there was also an excess of attacks in 1870, which produced comparatively little effect on the death-rate. The case mortality curve is much more orderly and shows a maximum severity in 1867-68 and 1865-66-67. Between these periods it fell and the intercurrent prevalence of 1870 was attended with a lower case mortality than the years preceding or following it. It was therefore a wave of prevalence merely, due perhaps to exceptional meteorological conditions; not due, at all events, to any increased potency of the disease or intensification of type. Under such conditions the case mortality is always lowered, for reasons which will become apparent presently. In Christiania the salient features of the death curve are primarily related to changes in case mortality, although changes in prevalence accompany these for the most part. Increased case mortality seems always to carry with it increased prevalence, but there may be (as in 1870) prevalence without increased severity. Evidence of another kind may be obtained by comparing the case mortality among hospital patients with the death-rate of the community from which they are drawn. The scarlet fever case mortality in the London Fever Hospital from 1832 onwards shows a tolerably steady rise and fall, with wave lengths of about five or six years; and, moreover, this rise and fall are at nearly all points parallel with that of the London scarlet fever mortality, especially during the period from 1859 to 1880. From 1872 onward the statistics of the Metropolitan Asylums Board Hospitals are available.

In the "eighties" both curves decline, and in declining lose their rhythm. In the Metropolitan Asylums Board hospitals the patients are drawn from a different class, and the case mortality has declined much less rapidly. It is noteworthy that the indications of the old rhythm are better preserved in the severity curve of these hospitals than in the other—a further illustration of the fact that loss of rhythm and decline of severity are in some way bound up together. Here again the mortality curve is seen to be moulded primarily upon that of severity, and as long as the severity runs high the mortality curve is closely parallel to it. When, however, severity declines to a low level, its slight variations are no longer traceable clearly in the death curve, being observed by the sharp and irregular variations in prevalence due to season or accident or accumulation of susceptible persons. Other things being equal, the maximum prevalence will naturally occur at the periods when the disease

is of most virulent and most highly infectious type; but, as other things are not always equal, epidemic extension occurs at other times too.

Similar evidence upon a smaller scale is to be found in the hospital record of Hull, Birmingham and other towns. It may be suspected that the epidemic rhythm is still maintained, though too faintly to be detected by such crude tests as case mortality or death-rates, and that it will reassert itself if and when the type of disease again becomes more severe. On the other hand it seems clear that there is nothing essential or permanent in the length of the five or six years cycle, since it is often shortened or lengthened, and there are no grounds for fixing limits in either direction. It is possible too that the persistent removal to hospital of the most virulent cases has had something to do with the present low average of case mortality, not merely by increasing the chances of recovery, but also by leaving only the milder attacks to propagate their kind by diffusing infection. But here, again, it must be remembered that the attenuation began before isolation assumed large proportions and has not been altogether limited to the towns in which isolation has been practised. In former years, too, long intervals of low intensity have been recorded, but have not proved permanent.

Table of Scarlet Fever Death-rate in London.

Year.	Scarlet fever death rate, London.	Case mortality. London Fever Hospital.	Case mortality. Metropolitan Asylums Board Hospitals.
1859	1·28	11·7	—
1860	0·73	11·0	—
1861	0·85	12·3	—
1862	1·22	12·8	—
1863	1·71	16·0	—
1864	1·10	16·0	—
1865	0·73	13·2	—
1866	0·62	10·3	—
1867	0·47	6·7	—
1868	0·93	10·2	—
1869	1·84	15·3	—
1870	1·88	13·2	—
1871	0·58	12·5	—
1872	0·28	9·1	10·8
1873	0·19	6·8	6·6
1874	0·77	10·5	12·2
1875	1·10	12·8	13·7
1876	0·65	11·4	12·1
1877	0·44	9·6	12·1
1878	0·50	12·2	14·3
1879	0·72	13·0	15·3
1880	0·82	11·3	12·3
1881	0·55	10·4	11·1
1882	0·52	8·8	10·4
1883	0·51	10·9	12·4
1884	0·36	10·8	12·3
1885	0·18	8·3	9·5
1886	0·17	7·5	9·0
1887	0·36	7·9	9·5
1888	0·30	2·3	9·9
1889	0·19	1·2	8·9
1890	0·21	2·3	7·9
1891	0·14	0·9	6·7

NOTE.—**The death-rates are taken from the Registrar-General's Annual Reports; the Metropolitan Asylums Board Hospitals' case mortality from the Statistical Reports of the Metropolitan Asylums Board; and the London Fever Hospital data were kindly furnished by Dr. Hopwood.**

In manufacturing and mining districts it seems that high intensity has prevailed, often for a long term of years, although not without some indication of the usual rhythm. In such districts the centres of population are near together, the intercommunication is free and the birth-rate is high. These circumstances may be regarded as conducive to sustained prevalence of scarlet fever.

It seems, then, that when the scarlet fever mortality curve rises at more or less regular intervals it does so for two reasons—because the attacks are more numerous and because they are more fatal in type. They are more numerous because there is increasing power of overcoming resistance, whereby those who were safe during the interval become more and more liable to attack; because the severer cases are more capable of diffusing infection; because the wider diffusion thus brought about lessens the chance of susceptible persons escaping; and, lastly, because the susceptible population had to some extent been reinforced during the years of comparative freedom from scarlet fever. After reaching its acme, the death-curve descends again for a year or two to a new minimum. It descends because there is a less susceptible population, less infectiveness and less fatal type. The attacks, while lessening in number, lessen in severity also; and as they are both fewer and milder the death-rate falls in compound ratio.

Vaccination has profoundly affected the epidemic course of small-pox, but changes of type are evident. In the latter part of the last century small-pox contributed on an average about one-tenth of the whole death-rate of London, and in 1796 no less than 18·3 per cent. After this, and coincidently with the introduction of vaccination, its ravages lessened until 1830. From 1830 to 1838 the records are missing, but in 1838 the mortality was again comparatively high, though below even the average which prevailed half a century before. After 1838 we can measure its course by actual death-rates, and a considerable degree of order and even rhythm becomes apparent. Every few years—usually four or five, but sometimes two or three only—it recurred as an epidemic, but with somewhat reduced destructiveness each time until 1855, which happened to be halfway between 1838 and 1871. After 1855 minor epidemics continued to recur at about the same interval, but the loss of life on each occasion increased rather than otherwise. Then came the great epidemic or pandemic of 1871, killing a larger proportion of the population than in 1838. The course of events for twenty years after 1871 was not unlike that which followed the 1838 epidemic—successive outbreaks at intervals of four or five years, decreasing in mortality, and subsiding after 1885 to a much lower level than was ever before reached.

Amongst unprotected persons the case mortality even now runs high, but the small-pox of to-day is evidently different from that of 1871—different in virulence of attack and still more so in infectiveness and power of epidemic diffusion. The last-named tendency especially seems to have been at a low ebb in 1888–90, as in the "fifties," and we may not unreasonably anticipate in the "nineties" the same sort of gradual intensification as occurred in the "sixties."

In considering the English epidemic of 1871 as part of the great pandemic which about that time overran Europe, we must not lose sight of the fact that for several years previously there had been indications of increasing intensity in London—i.e., a tendency to slightly greater destructiveness in each successive minor epidemic. The same may be said of Prussia and Austria.[1] In Russia small-pox was epidemic in 1841–42–43, 1853–54 and 1864–65–66–67, recurring at intervals of about eleven years and with steadily increasing intensity. Then after an interval of only five years came the pandemic of 1871–72, which (as in England) was much more destructive than the other terms of the series would have led us to anticipate; but, apart from the pandemic, a formidable outbreak would have been due in 1876. Whether the minor epidemics which occurred in London at intervals of four or five years were attended with any temporary increase of severity, as in scarlet fever, is a point of considerable doubt. Some indication of such a change is afforded by hospital statistics, though not very clearly. It has been observed that during the rise of a minor epidemic malignant and hæmorrhagic cases are more often met with than they are later on, and at the decline of these outbreaks infectiousness appears sometimes to be almost lost, even though virulence shows but little change. In May, 1884 (as in January, 1881) acute cases of small-pox were aggregated at the Fulham Hospital. Mr. Power found that this was followed by excessive incidence of small-pox upon the surrounding population, that the infection was in all probability air-borne, and that the meteorological records were of a character which seemed favourable for the aerial diffusion of particulate contagia; but in June and July, 1884, with greater accumulation of acute cases in hospital and apparently similar weather indications, there was little if any evidence of diffusion. Hence Mr. Power infers that the quality or infectiveness of small-pox itself may have changed in the interval. Another possibility would seem to be that the atmospheric states suited for such diffusion may include as an essential element some detail (perhaps purely local) not indicable in the rough data of ordinary meteorological readings, which are in truth only daily averages or

[1] **Report of the German Vaccination Commission, 1884; a summary is given by Dr. E. J. Edwardes, Epidemiological Society's Transactions, 1885–86.**

daily samples of conditions incessantly changing. Some limitation of the power of diffusion of infection must occur normally about June, for the average seasonal curve of mortality begins to decline sharply at that time. Presently it will be seen that this decline is attended with increased case mortality.

There has been some prevalence of small-pox in Yorkshire during the past two years, attended in many districts with certain anomalies of type—for example, an occasional interval of only twenty-four hours between a definite onset and the appearance of the rash, and sometimes an equally short interval between the first appearance of the rash and its attaining the vesicular stage. For the most part the aberrant types were slight and non-fatal. But this was not always so, nor were they limited to vaccinated persons. In one district at least the comparatively rare complication of pneumonia was met with in a considerable proportion of the attacks. It would be interesting to know whether irregularity of type has been observed in other parts of the country recently, and whether anything of the kind was noted at the corresponding period of forty years ago. To sum up: the type of small-pox seems to be stable, rising and falling in intensity if traced through long periods of years, the intensity being indicated even more by power of epidemic diffusion than by severity of attack; but apart from these long cycles there is a tendency to shorter cycles of four years or so, which may or may not prove to be accompanied by temporary increase of intensity and are probably governed by the accumulation of susceptible persons and other external conditions. Lastly, there are seasonal changes regulated by the facilities for diffusion and not attended by any change of intensity.

Measles presents many points of analogy with small-pox. They are alike in their independence of soil, water infection, and milk infection; in their relation to age and sex; in the duration of the intervals between infection and attack, and also between the onset and appearance of the rash; and in the primary seat of eruption. As regards the seasonal curve they have at all events the autumnal minimum in common. They are not unlike in the evidence which they afford of comparative constancy of type. Notwithstanding the scantiness of the records, alternate increase and decrease in virulence can be traced in many localities, each wave lasting often twenty years or more in this country, although perhaps less elsewhere. As in small-pox, the rise and fall of the broad primary curve is interrupted (in a sense mechanically) at short intervals by explosions occurring when the accumulation of susceptible persons is sufficient and the climatic and other external conditions offer sufficiently small resistance. These outbursts of measles are often of brief duration and terminate as soon as the balance among the conditions promoting and inhibiting the spread of infection inclines sufficiently far in the direction of the latter. The interval is variable, but in English towns is usually about two years. The exact time of outburst is evidently affected by climatic conditions, and as the mean seasonal curve shows two maxima —two points of least resistance six months apart—it is not surprising to find that the interval, when not exactly two years, is frequently one and a half or two and a half years. There is, however, no assured constancy in the balance of influences upon which the interval depends, and it is often reduced to one year or extended to three or four. In Sweden[2] and Norway[3] six or seven years usually elapse between successive outbreaks, and in Norway at all events there is evidence of higher case mortality accompanying each epidemic. The brief biennial explosions familiar in this country do not appear to be attended by increased case mortality. Their type is that of the prevailing phase of a broader wave. The bills of mortality show that about 1800 the average measles mortality in London began to increase, reaching a maximum about 1815. The Registrar-General's reports from 1838 onwards show a distinct rise and fall in London measles mortality, with maxima in the early "forties," in the "sixties" and in the "eighties," over and above the biennial rhythm already referred to. It is difficult to account for these long waves without assuming some altered quality of measles, and the more detailed records of certain provincial towns leave little room for doubt upon this point. At Sunderland[4] in 1885 a virulent epidemic prevailed, causing in one quarter a mortality equal to an annual rate of nine per thousand from measles alone. The recorded case mortality was twenty-nine per cent. Looking to the records of former years, it is seen that from 1875 onwards there were biennial explosions increasing progressively in destructiveness and culminating in the exceptionally malignant outbreak already referred to. Since 1885 epidemics on a declining scale have occurred at similar intervals. It would seem that the quality of measles underwent progressive changes from a minimum intensity in 1875 to a maximum in 1885, and that the course from 1875 to the present time is in a sense one great wave, interrupted repeatedly in a mechanical fashion by the temporary exhaustion of conditions of susceptibility and by other external conditions. In 1888-89 a severe epidemic prevailed at Hanley and was investigated by Mr. Spear.[5] He found that the symptoms were of aggravated type and the case mortality not far short of 9·0 per cent. On reference to the Registrar-General's returns for previous years we find that in the districts most severely affected there had been a succession of outbreaks at not very regular intervals, but steadily increasing in mortality, until, as already seen, there came an epidemic conspicuous above the rest for its severity of type as well as high mortality. A third example—in one respect more complete—is afforded by Barnsley. An exceptionally severe epidemic took place there early in 1891. It had been preceded by other outbreaks in 1881, 1883, 1886 and 1888 at intervals of about two years and a half. The measles death-rate increased with each successive epidemic, and Dr. Sadler, medical officer of health for the borough, observed that, at all events in the last three epidemics of the series, the type grew more and more severe, each occurrence exhibiting higher infectiveness and wider extension than its predecessors.

The change of quality in these instances seems clear, and a similar change may be inferred with more or less probability from the course of the measles death-curve in London, Wolverhampton and many other towns. The case mortality in measles is greatly influenced by surroundings, the severity and fatality being greatest among the poor. The experience of epidemics amongst soldiers in time of war seems to confirm this. In Fiji in 1875 the case mortality was enormous, and almost all the population, young and old, were attacked; but here not only neglect and exposure of the sick but exceptional susceptibility of a population never before invaded by measles have to be taken into account. The resistance was therefore lessened in two ways. Whether the destructiveness of the pestilence was to be attributed entirely to this lowered resistance, or whether there was an increased intensity of the contagium—in other words, a true change of type—remains to be proved.

[2] Arthur Ransome, M.D., Epidemiological Society's Transactions, 1881-82.

[3] Johannessen, loc cit.

[4] Annual Report of Medical Officer of Health for Sunderland, 1885.

ON THE TREATMENT OF HÆMORRHOIDS AND PROLAPSUS OF THE RECTUM BY CLAMP AND CAUTERY.

BY HENRY SMITH, F.R.C.S. ENG.,
CONSULTING SURGEON TO KING'S COLLEGE HOSPITAL.

As some years have elapsed since I brought before the profession any further experience of the treatment of hæmorrhoids and prolapsus of the rectum by means of the clamp and cautery, and as some important improvements were suggested and have since been carried out on a somewhat extensive scale, I think it may be useful to give some of the results of my later practice having reference to the alterations just mentioned. Before going into details I may say that these results have been such that my confidence in the use of the clamp and cautery has been established with greater firmness than ever. The objections which have been urged against the treatment in question, and which in its earlier history did exist, have been done away with, and, so far as my own experience has enabled me to judge, there are few surgical procedures attended with more satisfactory results as regards the relief and cure of disease and the restoration of the patient to health and comfort. When this mode of treatment was originally prominently brought before the profession the objects I had in view were to adopt a practice which would be attended with more safety to life and with less of the inconveniences which were liable to happen after the usual modes of treatment of hæmorrhoids and prolapsus, and which I had often witnessed in my own practice

[5] Annual Report of the Medical Officer to the Local Government Board, 1890.

and in that of other surgeons; fatal results were now and then witnessed after the severe and complicated operations in vogue, being due either to blood poisoning, lock-jaw or bleeding at the time, or after the proceedings in question. In other cases the convalescence of the patients was prolonged by long-continued and severe pain, by hæmorrhage difficult to arrest and by great constitutional irritation, and in some instances local complications, such as the production of extensive fistulæ and contraction of the bowels or anal orifice, added much to the misery of the patients. The results of the employment of the cautery quite justified the expectations I had formed. Death was a rare sequence of the operation, even in the earlier history of its adoption, and as an illustration of this I may mention that during the period of twenty-five years at King's College Hospital, where I was continually operating on cases of the greatest severity, not a single fatality occurred, and the few fatal results in my private practice took place in my earlier experience and before the method of treatment had been improved and amplified, as it has been during the last few years. Hæmorrhage, which was looked upon by many as a great drawback to the operation, is a thing of the past; the severe pain following it has been to a great degree lessened or abolished altogether. Contraction of the bowel can be entirely prevented, and the convalescence of the patient be materially shortened. In the earlier operations it was my custom to remove each of the hæmorrhoidal tumours after being included in the clamp by the scissors, and then to apply the heated cautery to the cut surface. In most cases this plan succeeded well; but from time to time I met with instances where the tumours were very large and more or less troublesome, bleeding either at the time or on the first action of the bowels. It therefore occurred to me that a cautery might be so constructed that it could be used for removing the growths and at the same time thoroughly sealing up every vessel. Mr. Matthews furnished the blades of the cauteries with serrated edges. This alteration formed a very great improvement and was illustrated in a woodcut in the last edition of the "Surgery of the Rectum." I have now quite abandoned the use of scissors, and always remove the tumours with the serrated cautery at a dull red heat. This change in the treatment has been attended with remarkable success. I have not been troubled with bleeding for several years; this is explained by the fact that when the tumours are separated in this way every vessel must of necessity be acted upon by the cautery, and the laceration produced by the serrated edges acts as an additional safeguard against bleeding. Another great addition to the treatment of late years adopted by me is the thorough dilatation of the sphincter previously to operation. I avoid actual rupture of its fibres, as I met with one very sad instance in a lady where this had been done and where almost complete incontinence of fæces remained. By the use of free dilatation of the sphincter the operation is more easily and satisfactorily performed, inasmuch as by this means the hæmorrhoidal mass is brought well down, and each growth can be more readily isolated and included in the clamp prior to using the serrated cautery. In addition to this advantage I have ascertained that the pain, which in some cases was more or less severe for an hour or so after the operation in my earlier practice, is very much lessened or totally absent when the anal orifice has been thoroughly dilated. Formerly, in order to prevent the pain, I was in the habit of making a clean cut through the sphincter, but since the use of the dilating process I have discarded this plan. I may also mention in connexion with this subject of pain after the operation, which is one of the main objections to the use of the ligature, that I find that the best local remedy for its relief is the constant application of very hot water by means of a small sponge. I have almost entirely discarded the use of cold water.

As stated above, I have had no trouble with hæmorrhage since the serrated cautery has been employed for the separation of the tumours—such as now and then took place when they were cut off by scissors and subsequently cauterised. By such a process it was difficult to be certain always that every vessel was commanded, as is the case now when the growths are separated by the cautery. Moreover, I have quite discarded the practice of making an incision of more or less depth at the base of the pile prior to seizing it in the blades of the clamp. This was a totally needless proceeding and was productive occasionally of troublesome hæmorrhage.

Retention of urine after this operation either in the male or female is rare. A suppository of two grains of opium is used immediately and the patient is told not to make any attempt to micturate until some hours have elapsed and the desire has become great. Also the patient should not be permitted to try to obey the call whilst in the recumbent posture in bed.

As a rule the constitutional disturbance is so slight that the temperature is hardly affected and it is difficult to persuade the patient that it is needful to remain in bed for a few days. I have met with only one case for several years which was productive of anxiety. This was last year in the instance of an elderly lady living in the country, on whom I operated for a large mass of hæmorrhoids of many years' persistence. I had left her for ten days, as she was apparently approaching convalescence, but a fortnight after the operation I received a message from her medical attendant asking me to visit her. Her condition had been unsatisfactory for three days, and when I saw her she had some symptoms of blood-poisoning, great depression, dry and brown tongue and rapid pulse; but the face did not present that peculiar aspect which accompanies this grave malady. Still, the case was a serious one and I was very anxious about her. I ordered very large doses of brandy every few hours. The symptoms rapidly disappeared, and the patient recovered. Whether this was a case of blood-poisoning or not I cannot tell. The patient had previously had an attack of the prevailing influenza, and it occurred to me that her grave condition might have had something to do with the effects of the epidemic.

With regard to the liability of contraction of the bowel taking place after the operation by the clamp and cautery, I am glad to say that I have not met with any cases of late years where this occurred. In the earlier days of this operation I met with a case occasionally where contraction had occurred, but at that time my experience was somewhat limited. As it, however, increased I was enabled to avoid the causes of this mishap, which consisted, in the first place, in encroaching too much on healthy tissue and, secondly, in removing skin somewhat freely. It is my custom now not to take away more than the actual diseased tissue, and, as to skin, I leave it as it is, except in instances where it is excessively redundant or, in some old cases of prolapsus ani, with great dilatation and relaxation of the orifice. By taking these precautions contraction will be prevented. Moreover, I recommend patients to pass a bougie of moderate size for themselves occasionally after the parts have become thoroughly healed. I have never met with such severe cases of stricture of the bowel after the cautery as I have witnessed after either the old operation of excision or the modern one of crushing, and for the cure of which condition I have been compelled to divide the contraction freely.

With regard to the instruments in use I have not had occasion to make any alteration in the clamps of late. Messrs. Matthews have exercised so much care in their construction that, so far as I can see, they are in every way adapted for the purpose for which they are employed.

Wimpole-street, W.

THE PHYSIOLOGY OF DEATH FROM TRAUMATIC FEVER.

A STUDY IN ABDOMINAL SURGERY.

BY JOHN D. MALCOLM, M.B., C.M., F.R.C.S. EDIN.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

(*Continued from p. 410.*)

The effects of contraction of the arteries on the rate of the cardiac rhythm.—The contraction of the arteries must throw a great increase of work on the heart, and it is clear that the cardiac muscle does not in ordinary circumstances work at its full power. It is also known that in many diseases of the heart and of the kidneys, when increased work is thrown on the former, cardiac hypertrophy occurs, and the heart's action is frequently slowed in accordance with Marey's law. If, however, the work of the heart be too greatly or too suddenly increased a quick, feeble pulse results, or instantaneous death may occur.[1] It is a clinical fact that a weak heart is very apt to be a quickly beating heart. But too much work and weakness are terms entirely relative. Just as in

[1] Remarks on Failure of the Heart from Over-strain: Roy and Adami, Brit. Med. Jour., vol. ii. 1888, p. 1321.

active exercise, in which there is a strictly physiological but, it may be, an extreme condition, the rapidity of the pulse must be attributed to the extra work required of the heart, so the quickening of the pulse in fever and in shock is a simple result of the increase of work thrown upon the cardiac muscle by the contraction of the arteries. This matter is elucidated by a study of certain cases in which constriction of arteries and increase of blood pressure occur without any corresponding acceleration of pulse-rate. Such a case as the following indicates well the condition to which I wish to direct attention. The patient died of pseudo-ileus, but the pulse was beating 96 to the minute six hours before death. One hour before death the pulse could not be counted at the wrist, though the heart was beating loudly and distinctly 108 to the minute. The temperature in the axilla was 101·6° F. I have never seen any other patient dying in this way without the pulse rising for days before and finally becoming uncountable at from 140 to 160 to the minute. At the post-mortem examination in this case it was found that the cardiac muscle was remarkably firm and healthy, and that the wall of the left ventricle was hypertrophied to quite twice its normal thickness, whilst its cavity was not enlarged and its valves were in every respect normal. The evidence of cases like this seems strongly in favour of the view that if the heart be sufficiently powerful it will not beat rapidly from the existence of a simple inflammation unless this be of the most intense character or accompanied by other conditions acting adversely on the heart. Consequently the quick pulse is due to weakness of the heart relatively to the amount of work required to be done by it. This applies not only to individuals but to physiological conditions. For instance the undeveloped heart of the child is apt to beat more rapidly than that of an adult under similar circumstances. In the parturient woman also the pulse is characterised by a comparative slowness, sometimes in strong contrast to the state of the temperature. In women after delivery there exists an excess of cardiac power from hypertrophy of the left ventricle, and this hypertrophy is most marked in multiparæ,[2] in whom also the slow cardiac action after delivery is most obvious.[3] It is open to conjecture that a similar hypertrophy may frequently occur in cases of abdominal tumour and chronic inflammatory disease and may account for the truly marvellous recoveries that sometimes follow operations in such cases.[4] Although the character of the pulse depends on the state of the vessels more than on the strength of the heart it may be said that cardiac weakness and cardiac overwork come to very much the same thing. There is, however, reason to believe that death from traumatic fever, from some cases of shock and from pseudo-ileus following laparotomy usually begins elsewhere and not at the heart. In cases of pseudo-ileus following an abdominal section the evidence to this effect is most easily made out, because in these cases a contraction of the vessels is induced, whilst the inflammatory conditions are becoming less marked, and therefore the effects of contraction of the arteries are to some extent separated from the other results of the inflammation.

Olshausen's and Verchère's explanation of the symptoms and of the cause of death in cases of pseudo-ileus.—Olshausen and Verchère attribute the deaths in these cases to the absorption of some poisonous substance from the alimentary canal, and this is the explanation given by most recent writers of the effect of constipation on traumatic fever. This explanation is not altogether satisfactory. A simple obstruction of the bowels, as from a stricture, may be complete, and yet the patient may continue to exist for many days, even for weeks.[5] Death is eventually due to a gradual exhaustion of the vital powers or to some accidental complication; but obstruction of the bowels during the first three or four days of convalescence from an abdominal section, if complete, is invariably fatal not later than three or four days after progressive symptoms of obstruction become well marked. The passage of flatus through the anus, a movement of the bowels, or the removal of a large quantity of fluid from the stomach by means of the œsophageal tube will alleviate the symptoms and may delay the result; but unless the obstructive condition be removed death is inevitable. On the other hand, if the abdominal distension be permanently relieved, recovery may take place when the adverse symptoms are very far advanced. The phenomena induced are therefore clearly due to the combination of the effects of obstruction of the bowels with those of traumatic inflammation. Conversely, I think it is found that all cases of rapidly fatal obstruction of the bowels are complicated by some inflammatory mischief, injury, or strangulation of tissue. Verchère states that micro-organisms are found in the fluid in a hernial sac, especially if much manipulation has been employed in taxis, and that if such fluid be reduced into the peritoneum death results from the septicæmia which he has described. He argues that when intestinal paralysis occurs after a laparotomy there is a peculiar condition of the walls of the intestine which permits a kind of filtration through the intestinal coats. Consequently there is an escape of intestinal fluids or putrid gases. These fluids and gases are charged with micro-organisms which find in the peritoneum a favourable nidus for their absorption, and septicæmia commences.[6] It is, however, to be noted that Verchère includes in his paper the consideration of a great variety of conditions—namely, accidental injuries to the abdomen and operations for herniæ of all kinds, as well as laparotomies for various objects. He joins together for the purposes of scientific evidence all these cases, whether the gut has been left without damage or has been seriously injured. To embrace the results of such a wide range of observation and to endeavour to reduce the pathology of so many varying conditions to one standard tends rather to confuse than to elucidate the ideas which are formed of the pathological changes under consideration. A case of strangulated hernia or of severe contusion or laceration of the bowel should not be classed with a case of laparotomy in which no injury whatever has been done to the intestine beyond its exposure and manipulation with the hands and with the sponges. Yet Verchère distinctly says the strongest contingent of deaths from paralysis of the bowels is found in the simpler cases. Verchère and Olshausen have separated cases of death due to pseudo-ileus from those due to peritonitis, but they have still confounded them alike in their clinical and pathological aspects. They have made up their clinical picture from a consideration of both simple and complex cases, but mainly from the former, their pathology being founded entirely on the conditions observed in complicated cases only. Verchère's statement that these cases show a well-marked facies abdominalis is certainly not correct. The patient may be quite sensible, cheerful and hopeful till half-an-hour before death. Again, the temperature, according to Verchère, is normal or subnormal till the last moments, while the pulse is feeble and rapid throughout. This is not to be observed in an uncomplicated case of ileus, or pseudo-ileus, following a laparotomy. In making the vomiting a general symptom, as opposed to the local ones, Verchère evidently means to attribute this to the septic condition which he believes to exist. From the fluid which accumulates in the alimentary canal it is assumed by Verchère, Olshausen and many others that a poisonous matter is absorbed which is the cause of the symptoms—and of death, if death ensue. Nevertheless it is easy to observe in these cases that whilst the obstructive condition continues large quantities of fluid are thrown into the alimentary canal and are in great part ejected by the act of vomiting. During the continuance of this process the condition of the patient grows steadily worse. If, on the other hand, as not infrequently happens, the obstructive condition be suddenly removed so that the flatus passes downwards, the vomiting at once ceases. It is evident that under these circumstances much of the liquid contents of the bowel must be absorbed, for diarrhœa does not often occur; but the escape of flatus from the bowel and cessation of vomiting in these cases are invariably accompanied by a marked improvement of the general condition. There is often a sharp rise of temperature with this improvement, due to the tearing of adhesions. The pulse, however, rarely rises in proportion, and usually becomes slower and softer in contrast with the temperature change. Thus the patient becomes worse when getting rid of the fluid from the bowels freely, and improves when absorbing it. The evidence to be found in these conditions seems very inadequate to support the conclusion that a poison in the intestine is

[2] Playfair's Midwifery, vol. i., p. 139.

[3] Otto Spiegelberg's Midwifery, translated by J. Hurry, vol. i., p. 289.

[4] In a paper recently published by Roy and Adami on the Physiology and Pathology of the Mammalian Heart (Philosophical Transactions, vol. clxxxiii B. 1892, p. 370) it is shown by exact experimental methods that a rise of blood pressure in the systemic arteries causes an increase in the force of the heart's contractions, and that this increase of force may or may not "more than counterbalance the increase in resistance to the contraction of the left ventricle" caused by the rise of the blood pressure.

[5] Treves on Intestinal Obstruction, p. 302.

[6] Revue de Chirurgie, July, 1888.

absorbed and causes the symptoms. It seems to me that the vomiting is due to exactly the same causes as in simple obstruction of the bowels and that the great quantity and character of the vomit may be explained in other ways.

The effect of a general contraction of the vessels on the tissues.—The evidence of the existence of any form of poisoning being thus defective, the question arises whether there is any other possible explanation of the signs and symptoms observed. Another, and I think a more rational, interpretation of the processes which precede death may be given. It has been seen that inflammation causes a diminution of the pressure in the small bloodvessels and increase of vascular tension in the heart and large vessels. This condition is aggravated by intestinal distension. It is obvious that if the contraction of the vessels becomes sufficiently intense in any particular area either the affected area must be altogether deprived of blood or the regulating force of the vaso-motor system must come into play and constrict some and, if need be, all the other vascular areas in an endeavour to force the blood into that first affected. Such an intense contraction of the vessels affects both the tissues and the blood itself. First, as regards the tissues: in cases of obstruction following an abdominal section the urine invariably diminishes in quantity and in specific gravity as distension progresses; but there is no albuminuria. The amount of urine in health depends on the difference of "pressure between the blood in the glomeruli and the pressure within the renal tubules."[7] Hence in diminished blood pressure within the glomeruli there is a sufficient explanation of the state of the urine in the cases under consideration. The pulse is always small when the urine diminishes in these cases. About the same time that this change in the urine becomes marked, or soon afterwards, the surface becomes very cold, evidently from deficient circulation in the superficial vessels, for the internal temperature may be rising to a great height at the same time. This may be observed during the last five or six hours or more of life. A condition of coma comes on with very slight warning shortly before death, the patient being usually quite sensible till the last half-hour or less. The exclusion of blood from the organs of thought and from the motor areas is a sufficient explanation of this change, and as we have seen that there is a gradually increasing constriction of the vessels it is rational to assume that this is the cause of the coma also. The vital centres in the medulla are finally affected and the lungs and heart cease to act. During the final moments of life, if the heart be listened to, doubt must in many cases at once arise as to the correctness of any explanation of the phenomena observed which assumes that cardiac failure is an important element in their causation. When the pulse is absolutely gone from the wrist and the respiration is a mere spasmodic contraction of the diaphragm the heart in some cases may be heard beating with wonderful regularity. There must be some vascular areas which are not, up to the very last, so constricted as to stop the circulation. Probably the circulation goes on longest in the central and warmer parts of the body. Hence, as in death from shock, there is often congestion of the internal viscera. The conditions observed point inevitably to the conclusion that in the cases under consideration the arterial system gradually contracts. If the cause continues and is sufficiently powerful the blood is excluded from one area after another till the medulla oblongata is affected and the patient dies. A gradually weakening heart would lead to the same results without any constriction of the vessels at all, but the effects of the constriction of the vessels are absolutely independent of the strength or weakness of the heart. Though the condition usually causes cardiac debility, yet the strongest heart cannot save a patient from death if an ileus or a pseudo-ileus supervenes on an abdominal section. The advancing constriction of the vessels when sufficiently severe must affect the inflamed area in the same way as any other, for the dilatation of the vessels around this area is a local condition; but a free supply of blood to inflamed tissues is essential to their satisfactory resolution. In cases of abdominal section, when distension of the intestine occurs as the primary changes in the wounded tissues are subsiding, the vascular supply to the healing parts must be shut off both by direct pressure and by reflex contraction of the vessels. As the tympanites increases, therefore, a return of inflammation, and that of an unhealthy type, is certain sooner or later to take place in the wound. It is not to be wondered at that when the fresh burden of a diffuse unhealthy inflammation is thrown on the system death is inevitable and rapid. The secondary inflammation thus induced appears to be the cause of the rise of temperature which invariably occurs in these cases. In this lies the explanation of the difference of the effects produced by this condition on the pulse and on the temperature. The inflammation which causes the secondary fever is a consequence of the changes in the vascular system, and therefore the pulse changes precede the temperature changes.

In uncomplicated traumatic fever it is not so easy to differentiate the effects of the contraction of the vessels on the tissues; moreover, death from inflammation is very rare without the presence of some complication—most commonly septicæmia—which renders the symptoms less definite. With these cases of pseudo-ileus after laparotomy as a guide, it is however not difficult to detect in death from acute inflammation all the evidences of the vascular changes described. The contraction of the vessels also explains those cases in which death occurs from twelve to sixty hours after an operation, apparently from the severity of the procedure. Such cases are variously attributed to "shock" and "exhaustion." The patients certainly rally to some extent from the immediate effects of the operation, so that the term "shock" is not quite appropriate; on the other hand, the term "exhaustion" should be reserved as a rule for cases of death after a much more prolonged illness. In the cases under consideration the contraction of the vessels due to the shock does not relax before that due to the inflammatory changes comes on with great severity. The urinary secretion is never free; it may be completely suppressed from the first. The patient does not become properly warmed; full mental activity is not restored. After a variable time death takes place with all the evidences of intense contraction of the vessels. The fatal result depends on an excessive degree of injury as compared with the vital power of the patient and with the regulating power of the vaso-motor system. Perhaps in these cases more than in any other the fatality may be attributed to uncomplicated traumatic fever. Such deaths only occur in very feeble individuals or after the most severe operations. They must be carefully separated from cases of acute septicæmia, which they may closely resemble, but which occur after any operations and as readily in the healthy as in the feeble. Here it may be remarked that the vascular conditions in death from inflammation, as above described, have a close similarity to those of death from old age. It has been said that "the great difference between death from old age and death from a sudden seizure is that in the former death commences at the periphery and terminates at the heart—the empire of death begins at the circumference and ends at the centre; whilst in the latter death commences at the heart and spreads over the body generally—death begins at the centre of vitality and gradually extends to its utmost bounds."[8] If, however, the view of the pathology of death from inflammation described in this paper be the correct one, then death from traumatic fever is only a very rapid example of death beginning at the periphery and terminating at the centre. In respect of the vascular changes death from inflammation is as much in contrast with death from syncope, due to cardiac weakness or disease, as is death from senility. In inflammation, as in old age, the heart is the last part of the body to give up the struggle. When the heart is so overworked as it is in asthenic fever, cardiac failure and sudden death may be easily brought about and sometimes follow an imprudent or involuntary muscular effort. I have seen one patient die from sudden cardiac failure due to choking during an effort at deglutition. She was undoubtedly dying in the slow way which is common in cases of pseudo-ileus after a laparotomy, and nothing could have been more marked than the contrast between the usual mode of death in those cases and the sudden cessation of respiratory and muscular effort, the immediate and absolute extinction of all physical and mental power, which was brought about by a violent attempt to cough.

Erratum.—In the first part of this paper, published last week, and in the twentieth line of the first column of p. 409, for "likely" read *unlikely*.

(To be continued.)

[7] Landois and Stirling, fourth edition, p. 522.

[8] Bichat: Recherches Physiologiques sur la Vie et la Mort, Paris, 1805, p. 151 (quoted by Geo. W. Balfour in the Edinburgh Medical Journal, March, 1887, p. 775).

COMPOUND FRACTURE OF THE LEG.

SECONDARY HÆMORRHAGE; LIGATURE OF THE ANTERIOR TIBIAL ARTERY; RECOVERY.

BY A. PEARCE GOULD, M.S. LOND., F.R.C.S. ENG.,
SENIOR ASSISTANT SURGEON, MIDDLESEX HOSPITAL.

INJURY of a main vessel is not so frequent a complication of fracture of a bone as might be expected when the proximity of vessels to bones is taken into consideration, and the fact that in many cases fractures are the result of very great force applied to a limb. When it does occur it forms a very grave complication and its treatment is a matter of great moment; but the subject has not received much attention from English surgical writers, and the result is that the brief references to it in our well-known text-books and monographs show that the line of practice to be pursued has not been definitely decided. The following references and quotations will best show the current teaching on this matter.

Mr. Beck, in the eighth edition of Erichsen's Surgery, advocates amputation for primary hæmorrhage from a large artery in compound fracture, but advises that in secondary hæmorrhage pressure and bandaging and in many cases ligature of the main artery higher up should be tried before amputation. Mr. Bryant, in the third edition of his "Manual of Surgery," writes: "It would appear that in compound fracture complicated with arterial hæmorrhage the vessel ought to be secured, if possible, in the wound, if not above it; and that primary or secondary amputation should only be resorted to when the local injury forbids any hope of a natural recovery being entertained." Mr. Pick writes in the fifth edition of "Holmes' and Hulke's System of Surgery": "If either of the main arteries is wounded, it is better to amputate, at least in an adult." In his "Clinical Manual on Fractures and Dislocations" I cannot find any reference to the treatment of severe arterial hæmorrhage in compound fractures or to the occurrence of secondary hæmorrhage in these cases. In the fifth edition of "Holmes' Surgery," edited by Mr. Pick, amputation is recommended for cases of compound fracture where the main arteries are injured, particularly in the lower limb, and no alternative treatment is mentioned. Secondary hæmorrhage is not referred to. Mr. Howard Marsh, writing in "Heath's Dictionary of Surgery," advocates the ligature of both ends of wounded arteries in primary hæmorrhage, and, failing this, amputation; and in secondary hæmorrhage amputation only. Mr. Stanley Boyd, in the last edition of "Druitt's Surgeon's Vade Mecum," writes in reference to these cases: "The vessel or vessels must be tied (perhaps through a counter-opening); failing this, amputate." He does not refer to cases of secondary hæmorrhage. Mr. Mansell Moullin, referring apparently only to cases of primary hæmorrhage, advises that the bleeding artery must be tied above and below the wound in it or the limb must be amputated, and argues against ligature of the main artery higher up. Mr. Walsham gives the same advice.

Amongst American writers, Hamilton, in his classical work on "Fractures and Dislocations," makes no reference to the subject. Agnew states that in cases of arterial hæmorrhage from one of the tibials complicating a compound fracture in the lower third of the leg the vessel should be sought for and tied, and that if the fracture is at the upper part of the leg recourse must be had to amputation. Stimson refers to the writings of others but gives no directions for treatment in these cases. Koenig does not deal with the question at all. Gürlt discusses it very fully and his opinion may be thus expressed. For primary hæmorrhage pressure and cold should be employed, and in more severe cases the vessels should be tied *in situ*. In secondary hæmorrhage, if the local conditions are favourable, the main artery above should be tied, but if the local conditions are severe—e.g., extensive suppuration—amputation should be performed. Such divergence of view on an important point in surgical practice may be attributed to the necessarily limited experience on the part of the authors themselves, to the variations in the conditions existing in different cases, and to the influence of the experience gained before the introduction of aseptic surgery; but whatever its explanation, it affords a strong reason for recording any cases which may aid in making clear the line of practice to be followed, and it is for this purpose that I desire to place on record the following case.

A man aged fifty-two, sober in his habits, the subject of chronic articular rheumatism, was thrown from his dog-cart on the afternoon of Nov. 12th, 1891, and the wheel passed over his right leg. His friends bound his leg up with stout sticks and took him home in a van, a distance of four miles. Dr. Edwards of Bexley was sent for, and found that he had sustained an oblique fracture of the right tibia and a fracture of the fibula a little below the middle of their shafts, and that there was extensive bruising and a small clean-cut wound on the inner side of the leg leading down to the fracture. There was considerable overriding of the fragments and it was difficult to get them into correct position. This was done, however, by extension and the limb was fixed upon a metal back-splint, with a foot piece, and two straight wooden splints at the sides, and swung in a cradle. Careful efforts were made to secure asepticity of the wound, and it was dressed with iodoform and naphthalin. All went well, except for a good deal of local swelling and sleeplessness, which demanded a nightly dose of opium, until the 18th, when some oozing of blood was noticed from the small wound. This did not recur. On the 23rd fluctuation was detected over the inner surface of the tibia, and a good deal of swelling was present. Dr. Edwards made an incision and let out about two ounces of blood-clot. Then on the 25th (thirteenth day), at 7 P.M., he was summoned hurriedly and found the dressings soaked in blood, and on removing them found the whole leg from the knee to the ankle greatly swelled and blood flowing freely from the incision made two days before. A Petit's tourniquet was placed on the femoral artery and I was asked to see the case. This I did at 11 P.M. I found the patient quiet, pale, with a small soft frequent pulse. The right leg below the knee was greatly swollen, and on loosening the tourniquet bright blood flowed freely from the incision; the posterior tibial artery was found to be pulsating at the ankle; no pulsation could be felt in the dorsal artery of the foot. There was no sign of suppuration in the wound. The diagnosis of hæmorrhage from the anterior tibial artery was made, and it was determined to attempt to ligature the bleeding vessel and if we failed then to amputate the leg. Mr. Walker kindly gave the patient chloroform and Dr. Edwards helped me. I made an incision four to five inches long in the line of the anterior tibial artery, turned out a great quantity of fluid and clotted blood and then was able to recognise the tibialis anticus muscle on the inner side of my incision; the extensor muscles of the toes were not so plainly recognised; the interosseous membrane was torn across and could not be felt. The lower end of the anterior tibial artery was easily found in the lower end of the wound and was tied with kangaroo tendon. The upper end of the artery was widely separated from the lower end and was only found with some difficulty; it was tied in the same way. It was now found that when the tourniquet was unscrewed no hæmorrhage occurred. The anterior tibial nerve was divided by the injury; I did not attempt its suture. There was so much swelling of the limb that it was impracticable to put in any sutures, so, after the wound had been well irrigated with bichloride of mercury solution (1 in 2000), it was dressed with alembroth gauze and placed in the same splints as before, which were now padded with alembroth wool. To make sure of the ready escape of any fluid from the deeper part of the wound a large drainage-tube was left in. The fracture was carefully examined through the wound, a small loose fragment was removed, and the ends of the bone were brought into exact apposition. On the 26th the temperature was 100·2°, the patient was free from pain, and sensation and circulation in the great toe were good. The temperature steadily fell and reached the normal on Dec. 2nd. The wound was dressed on Nov. 29th and Dec. 2nd, the discharge on each occasion being only serous. On Dec. 5th the temperature rose to 100·4°. The next day there was a discharge of pus from the wound; the temperature fell to normal and did not again rise above it. The wound progressed well. On Jan. 1st, 1892, the limb was put up in Gamgee millboard splints with gum and chalk, and as the wound was not quite healed a window for dressing it was made. On Feb. 12th the man returned to his business with a sound, straight leg; there was some stiffness of the knee and ankle joints, but he refused to let Dr. Edwards make passive movements, as he could "manage to get those joints supple himself." These joints are now supple. There is anæsthesia on the outer side of the dorsum of the great toe.

I wish to repeat, what I hope is plain in my history of the case, that my share in it was limited to the operation of

ligature of the artery. The conduct of the case up to and after that was entirely in the hands of Dr. Edwards, and to him, therefore, belongs the credit of the excellent result obtained.

The hæmorrhage in this case was due, not to septic arteritis, but to traumatism. The escape of blood was in the first instance only moderate in amount, but subsequently bleeding broke out afresh and was very profuse. To have ligatured the popliteal artery would have unnecessarily cut off the direct supply of blood to the part through the posterior tibial artery, and the tension of the leg was so great that it was doubtful if the anastomotic circulation could have been established. To tie the bleeding artery where wounded offered the advantages of an assured arrest of the bleeding without any additional interference with the arterial supply to the foot, the relief of tension by evacuation of the effused blood and the hastening of the repair by the same means. Attention has been called to the difficulty of finding the artery when the usual landmarks are lost. In this case I did not experience any great difficulty, chiefly, I think, because I took the precaution to make a very free incision down upon the artery; and I cannot help thinking that the difficulty of such an operation has been exaggerated, and that it should not deter the surgeon from undertaking it if on other grounds it is justified. Amputation should be entirely abandoned as a routine treatment for hæmorrhage in compound fracture, and is only justified by some additional special circumstance, such as failure to secure the bleeding vessel, or extensive septic infection of the tissues of the limb. Were I called upon to formulate the treatment of severe hæmorrhage as a complication of compound fracture I should put it thus: 1. In primary hæmorrhage the wounded vessel should be sought for in the wound and, if possible, both ends ligatured. For this purpose the wound may require to be considerably enlarged. If after a free exposure of the wound and a careful search the bleeding vessel cannot be found amputation is necessary. 2. In non-septic secondary hæmorrhage the same rule should be followed. 3. In secondary hæmorrhage from septic arteritis, if the suppuration is limited in area the bleeding vessel should be sought in the wound and a ligature placed upon it some little distance above and below the aperture in it, and the most careful means be employed to make and keep the part aseptic. Should the hæmorrhage recur the main artery above may be ligatured. Should this fail to arrest the bleeding, or should the septic suppuration in the first place be very extensive, amputation above the seat of fracture is indicated.

Queen Anne-street, W.

SOME REMARKS ON

THE PATHOLOGY AND TREATMENT OF TYPHOID FEVER.[1]

BY P. W. LATHAM, M.D. CAMB., F.R.C.P. LOND.,
SENIOR PHYSICIAN TO ADDENBROOKE'S HOSPITAL, AND DOWNING PROFESSOR OF MEDICINE IN THE UNIVERSITY OF CAMBRIDGE;
AND
ARTHUR C. LATHAM, B.A.,
BALLIOL COLLEGE, OXFORD.

TYPHOID FEVER has been so carefully described in all its clinical aspects that it is probably only from a bacteriological point of view that we can expect any advance in our knowledge regarding it. Recent investigations in this direction seem not only to throw considerable light upon the nature of the disorder, but also to furnish valuable suggestions as to its treatment, and to explain in some degree why and when certain remedies act beneficially or otherwise. In this paper, then, we propose to indicate as concisely as possible those more recent additions to our knowledge, and then to consider in the light of this knowledge the principles which should guide the profession in the treatment of the disease. We may, however, say at the outset that though the poisonous products of other micro-organisms may modify or intensify the disorder, yet typhoid fever must unquestionably be regarded as an acute infective disease due to a specific poison acting on the tissues of various parts of the body, and generated by a specific organism or organisms.

[1] A paper read before the Cambridge Medical Society, Feb. 3rd, 1893.

PART I.

A REVIEW OF THE LEADING FACTS IN THE BACTERIOLOGY OF TYPHOID FEVER.

By Arthur C. Latham.

In 1871 Recklinghausen[2] suggested that the microbes which were commonly found in typhoid abscesses were specific. In 1874 Klein[3] demonstrated the presence of several varieties of bacilli in typhoid lesions. In 1880 Eberth,[4] during some investigations upon the spleen and lymphatic glands, succeeded in finding in typhoid patients a special rod-like bacillus which differed essentially from the simple putrefaction bacteria, and which was not met with in other diseases. Eberth's statement was confirmed by Klebs[5] and in this country by Coates.[6] In 1884 Gaffky[7] was able to make pure cultivations of Eberth's bacillus, and so contributed very materially to our knowledge of the subject.

The bacilli are small slender rods, with rounded ends; they frequently form threads, and these threads differ in length according to the period of growth, and also according to the media used. They have a peculiar wavy motion which Pfeiffer, using Loeffler's method, has shown they owe to the presence of lateral flagella. They stain without much difficulty in watery colour solutions, but the staining of sections requires especial care. Fraenkel said that such sections would never stain by Gram's method, but Woodhead[8] has pointed out that the bacilli are well coloured if the sections are primarily placed in ¼ per cent. corrosive sublimate and then stained by Gram's method.

Gaffky held that the bacilli of typhoid fever possessed spores, and thought he was justified in this opinion because of certain microscopic appearances and the great vitality of the bacilli; but Büchner[9] and subsequently Schiller by staining methods, from the fact that a temperature of 60° C. for ten minutes destroys the bacilli, and that acids will induce a spore-like appearance, showed that the spore-like bodies of Gaffky were really appearances of degeneration, brought about by unfavourable conditions of growth. We must therefore hold that the bacilli are able to spread in the way that they do owing to their great vitality.

The bacilli grow both aerobically and anaerobically. Gaffky and others have shown that outside the body the bacillus in the presence of oxygen develops great powers of resistance and a saprophytic habit, whilst in the anaerobic condition its capability of resisting antiseptic substances is considerably diminished, although its power of developing its specific toxines is greatly increased. The bacilli grow readily upon gelatine, which they do not liquefy, thus differing from the bacterium termo, with which at one time they were confounded; they also grow on agar-agar, beef broth, and the other usual media, especially at about 25° C. The growth on potatoes is very characteristic. Thus on sour potatoes the growth is luxuriant, although a peculiar moist lustre is the only appearance visible to the naked eye. Other putrefactive bacilli are by this means distinguished from the Eberth-Gaffky bacillus. On alkaline potatoes there is a yellowish non-characteristic smear.

Wollfhügel[10] has shown that the bacilli thrive upon milk, although they produce no apparent change. The same observer has further shown that the bacilli will also live and even increase in water, and in this he was confirmed by Cassedebat,[11] who, however, holds that the typhoid bacillus does not occur so frequently in water as represented, but that some pseudo-typhoid bacilli, which he isolated from the water of Marseilles during a typhoid fever epidemic and which are non-pathogenic, have been mistaken for it. Adami[12] considers that, in all probability, these pseudo-bacilli are but variations of the true bacilli and may, under suitable conditions, recover their pathogenic power. Various observers, such as Chantemesse and Widal,[13] find that, unlike most bacteria, the Eberth-Gaffky bacillus is not killed, but will even go on increasing, after the addition of small quantities of carbolic acid: this affords a valuable means of separating the Eberth-Gaffky

[2] Würzburger Zeitschrift, June, 1871.
[3] Reports of Medical Officer of Local Government Board, 1874
[4] Archiv für Pathologische Anatomie, Band lxxxi., 1880.
[5] Archiv für Experimentale Pathologie, Band xiii., 1880.
[6] Brit. Med. Jour., vol. i. 1882.
[7] Mittheilungen aus dem Gesundheitsamt, Band ii., 1884.
[8] Bacteria and their Products, 1891.
[9] Centralblatt für Bacteriologie, 1888
[10] Wollfhügel und Reidel, Arbeiten aus dem Kaiserlichen Gesundheitsamte.
[11] Annales de l'Institut Pasteur, 1890.
[12] Medical Chronicle, September, 1892.
[13] Archives de Physiologie Normale et Pathologique, 1887.

bacillus from typhoid fæces. According to Kitasato,[14] who is upheld by Péré[15] and others, the cultures of the bacilli yield no indol; Sanarelli,[16] however, says this is by no means constant. The bacilli, according to most observers, produce acid in bouillon &c., and Brieger[17] obtained from pure cultures a poisonous ptomaine which on injection into animals caused their death; he named it typhotoxine, and at one time regarded it as the specific poison of the disease, but he has more recently modified his views. We may, perhaps, argue from the work of Roux and Yersin[18] upon diphtheria, and of Vaillard[19] upon tetanus, that in all probability the products of the Eberth-Gaffky bacillus are somewhat allied to the class of ferment bodies. Janowski[20] made some observations on the effect of light and heat upon the typhoid bacillus which are of great interest, seeing that nature utilises these means amongst others to destroy the bacilli. He found that direct sunlight—especially the chemical rays—will kill the organisms in from four to seven hours, whereas diffuse daylight has a distinctly retarding effect upon their growth; further, a temperature of 55° F. or of 14° C. will, when applied for a short time, destroy the bacilli. Büchner[21] found that the blood, acting inside or outside the body, has marked bactericidal effect upon the typhoid bacilli, killing them in a few hours; and Stern[22] has shown that whilst the blood of typhoid patients in the early stages of the disease has great bactericidal action, yet in the later stages it has no such power. These facts are important in connexion with the spread of typhoid bacilli from the intestines to such organs as the spleen and liver, and they would seem to show that—at any rate, in the early stages of the disease—the active bacilli must be largely confined to the lymphoid tissue of the intestine and to the mesenteric glands.

In the Cambridge pathological laboratory I have tried the effects of a few drugs upon the growth of the bacilli, and although this investigation is not yet complete I may say now that, amongst other substances, calomel, mercury with chalk, and β-naphthol, when in sufficient quantity, stop the growth of the bacilli, whereas certain other insoluble salts, such as subnitrate of bismuth, appear to have no such decided action. Further, it was found that even smaller quantities than 0·03 per cent. of pure calomel—i.e., 2·6 grains to a pint—are sufficient to prevent any growth.[23]

Typhoid bacilli are very similar in their main characteristics to the bacterium coli commune; and from the fact that the bacterium coli commune is always present in the human alimentary canal, and that it, according to Lesage and Macaigne,[24] always multiplies in an extraordinary manner during an attack of typhoid fever in man, many observers have been led to believe that the bacterium coli commune may acquire toxic properties and may become converted into the Eberth-Gaffky bacillus. Thus Rodet and Roux[25] concluded that the bacterium coli commune, under suitable conditions, such as contact with decomposing fæcal matter, acquires virulence and becomes the Eberth-Gaffky bacillus. The two forms may be differentiated, as has been shown by Chantemesse, Widal and Perdrix,[26] and also by Péré,[27] by the facts, amongst others, that whereas the bacterium coli commune induces coagulation of milk, and will produce carbonic acid in a culture to which calcium carbonate and 2 per cent. lactose have been added, the Eberth-Gaffky bacillus brings about neither of these changes. Again, the young forms of the Eberth-Gaffky bacillus possess from twelve to sixteen flagella, whereas those of the bacterium coli commune only possess from two to four pairs.

In cases of typhoid fever in human beings the bacilli are found in the lymphatic tissue of the intestines—especially in Peyer's patches and the solitary follicles,—in the mesenteric glands, the liver, and more rarely in the kidneys and even in the central nervous system, but not, apparently, in the blood. Boyd[28] suggests that the reason why the lymphoid tissue is especially attacked is that such tissue is possessed of low vitality; it is more probable (from certain results obtained by Kanthack and Hardy in an investigation which has not yet been completed) that the real cause lies in the fact that in such tissue the phagocytic cells are, for the most part, young non-adult forms, and that the eosinophile cells, which Kanthack and Hardy[29] have shown can destroy bacilli by extrusion of their granules, are relatively few in number. All through the disease we find that other organisms—usually streptococci—are associated with the Eberth-Gaffky bacillus, thus Klein found various forms, and it is not uncommon for erysipelas to be associated with typhoid fever. Streptococci and septic organism are thus frequently found in the tissue of the spleen, the liver and wall of the intestine. "Some of these organisms are supposed," Woodhead says in his work on "Bacteria and their Products," "to play their part in preparing the intestine for the reception of the typhoid bacillus, and it is maintained that a condition of irritation and a removal of the epithelium, brought about by the action of other micro-organisms on the wall of the intestine, may be necessary to prepare the way for the entrance of the typhoid bacillus. The intestine is, in fact, prepared just as a field is prepared by the farmer, by ploughing and manuring, for the reception of seed that he intends to sow." Others,[30] again, attribute the phenomena observed in the later stages of the disease to these other micro-organisms. I shall show directly that this relationship between the typhoid bacillus and other micro-organisms is borne out by the facts of experimentally produced typhoid fever.

The facts that the Eberth-Gaffky bacillus may be recognised in nearly all cases of typhoid fever (Gaffky found it in twenty-six out of twenty-eight) and that it is never found in any other disease justify the conclusion that this bacillus is the main cause of typhoid fever. The Italian physicians, recognising these facts, adopt the practice of extracting, by means of a hypodermic needle, some spleen pulp from their patients for diagnostic purposes, but in most cases the nature of the disease will have become manifest to the clinical physician before the bacteriologist has had time to give a definite opinion. Unfortunately the disease is only known to occur naturally in man, and consequently when the experimenter tries to comply in the case of animals with the well-known conditions laid down by Koch for determining the connexion of a bacillus with any particular disease, it is found that the evidence is somewhat conflicting and unconvincing. The Eberth-Gaffky bacillus, however, when sufficiently virulent, will cause a disease in animals which resembles typhoid fever in many of its features. The argument that other bacilli cause similar disturbances in the case of animals has no great weight, for these other bacilli are also found in other diseases.

In 1886 Fraenkel and Simmonds[31] inoculated animals with the typhoid bacillus, and found that about half of them died in a few days from symptoms not unlike those of typhoid fever. Seitz[32] also made some experiments, using the same method that Koch used in the case of cholera—i.e., he paralysed the intestines by opium and then, rendering the contents alkaline, he introduced the culture by means of an œsophageal tube. He obtained results similar to those of Fraenkel and Simmonds. Various other observers, such as Chantemesse and Widal,[33] Cygnaeus[34] and others, making experiments on various animals, came to the conclusion that the typhoid bacillus, by its multiplication and dissemination throughout the body, gave rise to a disease somewhat similar to typhoid fever in man. Others, such as Beumer and Peiper,[35] Brieger, Kitasato and Wassermann,[36] found that the products of the bacilli were sufficient to cause death. Beumer and Peiper further showed that exactly similar results were obtained when they injected into animals large quantities of inoffensive bacteria, such as the bacillus subtilis. Sanarelli[37] and Chantemesse and Widal[37] consider that the conflicting results

[14] Zeitschrift für Hygiene, Band vii.
[15] Annales de l'Institut Pasteur, July, 1892.
[16] Ibid., November, 1892.
[17] Untersuchungen über Ptomaine, Berlin, 1885–86.
[18] Annales de l'Institut Pasteur, 1888–89.
[19] Ibid., 1891. [20] Centralblatt für Bacteriologie, 1890.
[21] Archiv für Hygiene, 1890.
[22] Deutsche Medicinische Wochenschrift, 1892.
[23] Since writing the above I have found that in 1886 Seitz tried the effect of quinine, potassium chlorate, salicylic acid, calomel and other substances upon the typhoid bacilli, and showed that such substances, with the exception of naphthalene, prevented the growth of these organisms.—Seitz, Centralblatt für Bacteriologie, 1886.
[24] Bacterium Coli Commune, son Rôle dans la Pathologie, Paris, 1892.
[25] Comptes Rendus de la Société de Biologie, tome ii., No. 7, 1890.
[26] Société de Biologie, November, 1891. [27] Loc. cit.
[28] THE LANCET, March 26th, 1892.
[29] Proceedings of the Royal Society: a paper read on Nov. 17th, 1892.
[30] Boyd, loc. cit.
[31] Die Aetiologische Bedeutung des Typhus Bacillus: Hamburg und Leipzig, 1886.
[32] Bacteriologische Studien zur Typhusaetiologie. München, 1886.
[33] Archives de Physiologie Normale et Pathologique, 1887.
[34] Beiträge zur Pathologischen Anatomie und Allgemeinen Pathologie, Band viii., Heft 3, 1890.
[35] Centralblatt für Clinische Medicin, 1886, und Zeitschrift für Hygiene, 1887–88.
[36] Zeitschrift für Hygiene, 1892.
[37] Annales de l'Institut Pasteur, November, 1892.

obtained by previous experimenters were due to the fact that they were not dealing with a bacillus possessing a constant and high degree of virulence. The latter observers have further shown that outside the body the typhoid bacillus soon decreases in virulence. Sanarelli, Chantemesse and Widal were able to obtain a bacillus of constant and exalted virulence by passing the Eberth-Gaffky bacillus through a series of animals; thus they inoculated an animal with the bacillus and made fresh cultures from the bacilli found in the peritoneal exudation; these cultures were then injected into a second animal and so on. The process was rendered easier if they first "lowered the resistance" of the animals by injecting simultaneously with the typhoid bacilli the sterilised products of the bacterium coli commune or proteus vulgaris, sterilised typhoid stools, putrefying meat &c., but they found that such substances, to be effectual, must contain a fair quantity of indol.

By such means these observers were able to produce a disease with constant symptoms; they found, however, that the disease differed from typhoid fever in man in that the animals seldom died if they survived the first forty-eight hours after inoculation. Bacilli were found in most of the organs and in the blood. Sanarelli further found that in most cases of animals which died from five to twenty-five days after inoculation no typhoid bacilli could be discovered in the tissues or in the blood, and he therefore concluded that the animals died from an intoxication process. Again, when he injected the sterilised products of the bacterium coli commune &c. into animals which had recovered from previous typhoid injections he found that these animals suffered a relapse. This from a clinical standpoint is very interesting, and Sanarelli explains it by holding that in such animals some typhoid bacilli are still present, although in an enfeebled and non-pathogenic condition, and that these bacilli can recover their virulence under certain conditions; at all events, in those animals which succumbed under this treatment swarms of typhoid bacilli were to be found.

Turning to the question of production of immunity from typhoid fever, it was found that by several methods Fraenkel and Simmonds,[38] Chantemesse and Widal[39] and others were able to immunise certain animals. Brieger, Kitasato and Wassermann[40] obtained the best results, and they showed that the serum of such immunised animals would, when injected beneath the skin or into the veins, confer immunity upon guinea-pigs. Stern[41] further found that the serum of a man who had had typhoid fever would prevent the disease in mice, whereas the serum of a man who had never suffered from the disease had no such power. Sanarelli,[41] Chantemesse, and Widal[42] confirmed these results and amplified them. Thus the latter observers found that the animals rendered immune by the serum method obtained their immunity sooner, but retained it for a much shorter time than those animals which were rendered immune by other methods; further, although they were immune against infection, they were not immune against intoxication—that is, against the action of the products of the bacilli. Again, in six cases of persons who had had typhoid fever—in one case twenty years previously—they found that in all of them the serum had an immunising effect upon guinea-pigs and rabbits, whereas the serum of persons who had never had typhoid fever had no such constant effect. Moreover, the serum of persons who had had typhoid fever, and also of persons in various stages of typhoid fever, was found to bring about recovery of rabbits and guinea-pigs which some hours previously had been injected with typhoid cultures. Such animals, however, would now appear to be more susceptible than usual to further infection. The amount of serum injected, and the time which elapses between the inoculation of the cultures and the injection of the serum, are very important factors; thus if the lapse of time exceeds six hours the serum has no effect. The serum of persons who have never suffered from typhoid fever has no constant therapeutic value. Sanarelli, Chantemesse and Widal further find that the serum of immunised animals will also, up to a certain point, cut short the disease in other animals, whereas the serum of normal animals has no such constant effect.

When Chantemesse and Widal injected the serum of immunised animals into human beings suffering from typhoid fever they met with only negative results. It is seen, then, that this method of treatment is at present ineffective in the case of man, but that is no reason for jumping to the conclusion that nothing will be made out of it; the whole matter, as in the case of tetanus, is in a transitional stage, and probably only wants further investigation in order that good results may accrue. Thus, in all probability, typhoid fever in human beings, arguing from pathological data, is due to a cycle of changes. The intestine is prepared by some catarrh or by the action of certain micro-organisms, such as the bacterium coli commune,[43] for the reception of the Eberth-Gaffky bacillus. In this connexion it may be mentioned that Blostein[44] has, whilst working under very favourable conditions, lately come to the conclusion that cholera is due to the combined action of at least three micro-organisms. When the specific organism in typhoid fever has obtained a suitable hold upon the intestine it acquires greater virulence, and multiplying rapidly produces certain products which are absorbed into the system and set up the disease known as typhoid fever. It would appear from Stern's results that the blood by its bactericidal action prevents, at the beginning of the disorder, any spread of active bacilli from the intestines to other organs, but that in later stages this bactericidal power is lost, and consequently it is found that the bacilli migrate to such organs as the liver and spleen. Further, as the disease progresses, other organisms find a nidus and bring about their characteristic effects.

One word as to the spreading of the disease among human beings. When we realise that typhoid bacilli are present in the patients' stools and in severe cases in the urine; that they will grow in water, in milk, or in potatoes; that they can live a saprophytic life[45] in earth for several months—we do not need to look far for the cause of epidemics of typhoid fever. *A priori* reasoning is upheld in the case of water by such outbreaks as those at Harston[46] and at Caius College, Cambridge, in 1873;[47] many epidemics have also been traced to milk, but there is not much evidence in support of Walder's theory that the primary infection is in this case due to the cow.

It is, perhaps, as well to point out that those attending typhoid fever patients may easily infect their hands by the soiled linen or dejecta and so become infected themselves through the medium of the digestive tract. It is of course possible, under certain circumstances, that infection might take place by means of a wound, but this mode of infection must be a very rare one. Cygnaeus[48] considers that it may sometimes take place through the respiratory tract, because mice took the disease when they inhaled the germs, but this was probably due to the saliva becoming infected and subsequently being swallowed, and so causing infection by the digestive apparatus.

Typhoid fever in some localities is found to diminish as the ground water rises, but the connexion between these two facts does not appear in England to be very close, and what little there is seems to be dependent upon the fact that dryness up to a certain point will of necessity help to spread the bacilli. According to Flügge,[49] Pettenkofer's idea of a specific transformation of the infective agents in the soil is no longer admissible; nevertheless, we know that the typhoid bacillus alters in virulence according to its environment, and some observers go so far as to think it possible that, under certain suitable conditions, some harmless bacillus may, by a process of evolution, become converted into a pathogenic typhoid bacillus; this, however, is, in the light of our present knowledge, mere speculation.

(To be continued.)

[38] Loc. cit. [39] Loc. cit.
[40] Loc. cit. [41] Loc. cit.
[42] Annales de l'Institut Pasteur, November, 1892.

[43] Recently Chantemesse and Widal described the case of a woman who died from suppurative nephritis caused by the bacterium coli commune during convalescence from an attack of typhoid fever. Several days before death large quantities of bacterium coli commune had been found in the urine, where they gave rise to lactic acid fermentation.—*Medical Week*, January, 1893.
[44] Medical Society, St. Petersburg, 1892.
[45] Uffelmann: Wiener Medicinische Presse, 1888.
[46] THE LANCET, July 15th, 1871.
[47] Report of the Medical Officer of the Privy Council, 1874: New Series, No. II., p. 63. [48] Loc. cit.
[49] Micro-organisms, translated by Watson Cheyne, New Sydenham Society, 1890.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—Mr. Richard Thomas Hearn, having passed the necessary examination, has been admitted a Fellow of the College. The following gentlemen have passed the primary part of the examination for the Fellowship of the College: Mr. Ernest George Fenton, Mr. Herbert Charles Mooney and Mr. Alexander Ogilvy.

THE CAUSES OF DEATH IN BERI-BERI.[1]

BY MAX. F. SIMON, L.R.C.P. LOND., M.R.C.S. &c.,
PRINCIPAL CIVIL MEDICAL OFFICER, STRAITS SETTLEMENTS.

AT the outset of these remarks I wish to state that by "beri-beri" I mean the disease which we know by that name in the Straits Settlements and Malay Peninsula generally, and which is known by the name of "kakké" in Japan, its essential characteristics being those of multiple peripheral neuritis, and that my remarks will be essentially clinical. The general features of the disease are now well known, and no description is necessary for the object of this paper; its exact cause is not yet fully known, but it has its origin probably in something akin to malaria, is certainly very often connected with insanitary surroundings, overcrowding and dampness, occasionally with deficiency in nitrogenous food, and has nothing whatever to do, except by accidental coincidence, with anæmia or ankylostomiasis. The earliest of the more modern descriptions of the disease in question were especially concerned with that form of it which is characterised by swelling from œdema and by serous effusions, and the paralysis was then thought to be a secondary phenomenon left after the œdema had subsided, and was considered by some observers to be the effect of effusion into the spinal canal. After a time, however, it became clear that the paralytic symptoms were not those likely to be produced by a central lesion, but were the effect of peripheral nervous affection; and it was also found that the paralytic form of the disease could exist quite independently of the œdematous or coincidently with it, and that œdematous symptoms could develop in a patient attacked with the paralytic form just as the paralytic symptoms could supervene in an œdematous patient. So long ago as the end of 1881 or beginning of 1882 Mr. Anderson—now surgeon to St. Thomas's Hospital, who had a year or two previously written some lectures on kakké in Japan—wrote me to say that he had modified his earlier views regarding the pathology of the disease and that he was then of opinion that the nature of the paralysis was that of a multiple peripheral neuritis, an affection which was then beginning to be properly recognised. Beri-beri may cause death in three ways, which are, in order of their frequency: First, by failure of the heart from peripheral paralysis of its special nerves; secondly, by suffocation from congestion and œdema of the lungs; and, thirdly, by effusion into the pericardium. Paralysis of the diaphragm has been given as a cause of death, but I am not sure that this alone is sufficient to kill; I have certainly seen a patient live for days, I may say weeks, with only thoracic breathing, and ultimately recover. It is not to be wondered at that, when the disease first attracted attention, often in countries where it is very difficult to procure post-mortem examinations, effusion into the pericardium was credited with many more deaths than were really due to it, objective symptoms being often very deceptive in these cases. I may here state that I have on two occasions punctured the muscle of an enlarged heart with an aspirator needle, which was introduced with the object of drawing off effusion. Effusion existed, but not in sufficient quantity to cause death, and the increased dulness was to a large extent due to dilatation of the heart, paralysis of which organ was ultimately fatal. The second of the above conditions causing death was recognised by Mr. Anderson, who graphically described it in his lectures, and who dealt with it successfully by relieving the lungs and engorged right heart by bleeding. The first mode of death I have named is, I think, the most frequent—at all events with us—and is the most difficult to combat; in fact, at one time I thought that cases presenting symptoms of impending death in this way were invariably fatal.

With regard to death by effusion into the pericardium I shall content myself with saying that it is, I believe, of rare occurrence and is to be counteracted, when there is no doubt that effusion exists, by the ordinary means employed in similar cases caused by other affections than beri-beri—viz., purgatives, diuretics, blisters, and, if necessary, tapping the pericardium. I will treat the other two causes of death in a more detailed manner. It will be convenient to commence with the second of the modes of death which I have described, which is practically a death by suffocation from congestion and œdema of the lungs, and which is the form of death recognised by Mr. Anderson. I cannot do better than use his own words to describe the symptoms. He writes: "A patient comes under treatment for kakké of apparently an ordinary character; he is usually strong and well nourished, has no sign of anæmia, and little or no œdema; the disease progresses in the usual manner and no evil is anticipated, when suddenly rapid action of the heart, strong pulsation in the neck and difficulty of breathing appear, with a distressing pain in the abdomen; soon afterwards the patient vomits, and whilst an observer unaccustomed to see the disease still apprehends no danger the Japanese doctor recognises the commencement of 'Shiyôshin' and predicts that the man 'will surely die.' During the next few hours the breathing becomes more embarrassed, the pulsations of the heart more and more accelerated, and vomiting recurs from time to time. The patient now can lie down no longer; he sits up in bed or tosses restlessly from one position to another; and, with wrinkled brow, staring anxious eyes, dusky skin, blue parted lips, dilated nostrils, throbbing neck and labouring chest, presents a picture of the most terrible distress that the worst of diseases can inflict. There is no intermission even for a moment, and unless active treatment be at once resorted to the pulse fails, the temperature sinks, and at length the brain, paralysed by the carbonised blood, becomes insensible, leaving the dying man to pass his last moments in merciful unconsciousness."[2] I will only add to Mr. Anderson's description that in a case such as the above the pulse indicates a state of arterial tension—it is a hard pulse; and, as Mr. Anderson writes later when he goes further in his description of the symptoms, there are physical signs of pulmonary œdema, impairment of resonance on percussion and tubular breathing with moist crepitation, especially over the back, on auscultation. The heart, as regards auscultation and percussion, may be normal and there need be no loss of temperature, until perhaps, as Mr. Anderson writes, just before death. The urine in a case of this sort is scanty or nearly suppressed. In the event of the death of such a case the post-mortem appearances, as far as concern the clinical purposes of this paper, are as follows: The pericardium may contain one to four ounces of fluid, but there is generally very little effusion; the heart appears large and may be a little dilated, but its muscle is hard and it is evidently in systole. The cavities of the heart, especially those on the right side, are tightly full of blood, the blood being partly fluid and partly clotted, but in this form of death decolourised clots are rarely found. There are often spots of ecchymosis on the heart, beneath the visceral pericardium, such as have been described as occasionally found after death by drowning, and the vessels beneath the pericardium are generally congested. The lungs are œdematous and gorged with blood, and on being cut into show cut surfaces of a dark red colour, from which pour quantities of blood and serous effusion containing small air-bubbles.

In death from direct paralysis of the heart, the first of the above modes of death, dangerous symptoms also come on with unexpected suddenness. The patient may complain of some discomfort about the epigastrium, sometimes of acute pain; very often he vomits a frothy fluid and then dyspnœa sets in. In an uncomplicated case the dyspnœa is not exactly like that described above; the restlessness is present, but the patient seems rather to wish for air to breathe than to be unable to breathe air. The jugular veins may be full, but the fulness is not so pronounced as in the already described attack, nor is there any marked pulsation, and there may be very little lividity of the face. The pulse is quick, but not hard, and gradually becomes weaker. The temperature falls to 96° F. or even lower, and the patient shortly dies. The heart's area of dulness is generally increased and the sounds are weak. Post-mortem examination reveals, perhaps, some effusion into the pericardium, but this is not constant. The heart is generally much enlarged, its cavities being dilated and its walls in diastole. The cavities of the heart are full of blood, but not generally tightly full, and often contain decolourised clots. To these clots has been assigned by some observers the cause of death; but it seems to me more likely that the cause of death—i.e., failure of the heart muscle, which prevents the heart from properly contracting—in reality causes or favours the formation of these clots. The lungs may be, and generally are, congested, and the large

[1] A paper read before the Straits Medical Association, Aug. 13th, 1892.

[2] Lectures on Kakké, Yokohama, 1879, p. 6.

veins are full, but there is no marked œdema as described above.

I have described the symptoms and post-mortem appearances in these two modes of death, but they are not always so well marked. Failure of the heart may coincide with the vaso-motor condition, which I have no doubt gives rise to the dyspnœa in the class of cases first described, or it may supervene on this condition, and thus in the post-mortem examination one may find some mixture of the appearances described. One may find œdematous and engorged lungs and ecchymotic spots on the heart, with the heart in diastole and containing decolourised clots, showing that the patient first suffered from vaso-motor trouble, from which he may have perhaps partially recovered, and that then heart failure came on. There are, of course, other post-mortem appearances found in the body in cases of death from beri-beri, but I have described above only those which are sufficient for the clinical purposes of this paper.

With regard to the steps to be taken to prevent impending death, it must be borne in mind that the natural tendency of the disease, I think there is no doubt, is towards recovery. I mean that a patient left without treatment does not tend to get worse and worse always, as he would in, say, syphilis, but that the effects of the poison, whatever it may be, tend to reach a maximum and then to diminish. The maximum may be a low one or it may be high enough to kill the patient, but if he lives through it he will recover, and the object in treatment must be to help the patient to live long enough to secure this result. The duration of the maximum danger is also as a rule short, and recovery from dangerous symptoms generally rapid. An attack may be likened to a sudden storm, to be followed, if shipwreck during its height can be averted, by fair weather. In some cases the symptoms tend to recur once or twice for a few days, and the patient may die in a recurrence, but this is not always the case. The symptoms of a recurrence are sometimes exactly like those of the original attack, but occasionally when the original attack is one of dyspnœa from lung congestion the recurrence may show symptoms of heart failure and thereby increase considerably the danger. I do not think that Mr. Anderson, at the time when he wrote his lectures, realised the condition of primary paralysis of the heart muscle and I fancy he only attributed heart-failure to exhaustion of that organ from fighting against the obstruction in the lungs. It is in cases of impending death from pulmonary congestion and œdema that treatment can be more effectually used. There is no doubt, I think, that the cause of the trouble is arterial tension caused by vaso-motor disturbance of some sort, though I am unable to say exactly of what sort. It is conceivable, however, that some or all of the dilator nerves may be incapacitated by the disease, leaving the constrictor fibres full play. Mr. Anderson proposed, and successfully carried out, treatment of this condition by bleeding, which would not only relieve the circulation but would also tend to relax arterial tension. In one case he actually, I believe, nearly succeeded in saving his patient by bleeding from the right ventricle direct; the patient recovered from the attack, but died in a relapse. In 1882 it struck me that in nitro-glycerine we had what would probably prove a valuable remedy in these cases, in that by relieving arterial tension it would, in fact, bleed a patient into his own vessels, and I was not disappointed. The following are extracts from notes of two cases of undoubted recovery in consequence of this drug:—

CASE 1.—A Chinese long-sentence prisoner was admitted to hospital on Oct. 9th, 1882. He had previously been treated for slight swelling of the legs. On that day at 4.30 P.M., after bathing, he was suddenly taken ill with dyspnœa and was removed to hospital. He was seen by me at 5.10 P.M. He was then in great distress, with a hard pulse of 164 beats per minute, respiration 60, exaggerated breath sounds at both apices, and tubular breathing on both sides of the back of the chest. He had had ten drops of a 1 per cent. solution of nitro-glycerine at 4.50 P.M., and had had blisters put on the sides of his chest. He begged for more nitro-glycerine, and took five drops at 5.15 P.M. and five drops at 5.30 P.M. At 5.35 P.M. he was feeling easier, with respiration 46–47 and the pulse about 144; the latter had become soft after the second dose of nitro-glycerine, had become hard again, and was again getting softer. He was given five drops of the solution at 6 P.M., two drops at 7 P.M., and four drops at 9 P.M. At 9.10 P.M. he expressed himself as feeling easier, with the pulse 128; respiration about 46, but no distress, and the pulse soft. He was ordered to take three drops of the solution of nitro-glycerine every two hours. On the 10th at 7.20 A.M. the pulse was 132 and soft; the respiration was still hurried, but there was no distress. He vomited during the morning. He was ordered one drachm of compound jalap powder and one drop of the solution of nitro-glycerine in a diuretic mixture to be taken four times a day. In the afternoon, as he had passed no urine, he was dry-cupped over the loins and some scoparium was added to the mixture. On the 11th he was better and had passed about ten ounces of thick urine (sp. gr. 1030) since the previous night, besides some with his stools. After this he went on well, and on the 17th is stated in the notes to be pretty well, the breath sounds being healthy, with slight œdema of the back and none of the legs; pulse 84; urine 90 ounces. For a few days he was unable to walk very well and had some anæsthesia of the front of the legs and pain in the calf muscles, but these symptoms improved and he was discharged from hospital on the 30th. He stopped taking the nitro-glycerine on the 17th.

CASE 2.—Another Chinese long-sentence prisoner was admitted into hospital on Sept. 30th, 1882, suffering from slight œdema of the legs and some difficulty in walking. He had been ill about ten days, and the only note on the morning of his admission is that he had a rather quick pulse. He was put on a diuretic mixture, with one drop of nitro-glycerine solution to a dose, four times a day, and was also given a purge. On the morning of Oct. 2nd his pulse was 94, the œdema was less, and the urine was normal. On the evening of that day he was taken suddenly ill with violent dyspnœa, the jugular veins being much distended. He had three drops of the nitro-glycerine at 8 P.M. and five drops at 8.30 P.M. I saw him at 8.55 P.M. The patient then had a pulse of 128, fairly full; his respirations were extremely hurried, about 60 or more per minute, and his jugulars were full and pulsating. Eight or ten drops of the nitro-glycerine solution were dropped on the tongue and blisters were applied to the sides of the chest. At 10 P.M his pulse was still quick, about 120, but his respirations had fallen to about 30 and he felt easier; there was no pulsation in the neck. On the morning of the 4th he was reported as going on well, with the pulse about 84, and the respiration was 22, quiet and easy; the urine was scanty, being only about sixteen ounces in twenty-four hours. The patient was to continue one drop of the nitro-glycerine four times a day, which he had been taking since the previous morning. At 4.30 P.M. he had another attack of dyspnœa. The pulse was 124, the respiration was 48, and the jugulars were pulsating; this time he had a rise of temperature (101·4° F.). He was given five drops of the nitro-glycerine solution at once, and at 6 P.M. he felt easier, though he was still feverish. The patient was ordered a diaphoretic mixture every hour, with one drop of the nitro-glycerine solution to every fourth dose. After this he went on well and had no relapse; his urine increased in quantity, and some of the usual beri-beri symptoms, which increased a little after his admission to hospital, passed off. On the 24th he was reported as being nearly well and able to walk fairly; there was no œdema, no anæsthesia, but some tenderness of the calf muscles was present. On the 30th he was discharged.

I thought at first that I had hit upon a grand remedy for beri-beri, but I was of course disappointed. I found that certain cases were relieved by the drug, but only in a very passing way, and these invariably died. The first thing that attracted my attention in these cases was the falling temperature, and gradually one began to notice the absence of the hard quality of the pulse,[3] the difference in the dyspnœic symptoms and in the post-mortem appearances, and to associate them with primary heart failure. By primary heart failure I mean paralysis of its muscle from affection of the special nerves thereof, the degeneration in which Dr. von Tunzelmann, late acting colonial surgeon here, has demonstrated. The failure of the heart from paralysis is the great danger in this disease, and I regret that I cannot record any great success in treating this condition. Nitro-glycerine will give temporary relief, because it removes obstruction, and therefore the heart has less work to do; but the cause of the danger remains. Dr. von Tunzelmann has, however, I believe, obtained successful results in these cases of heart

[3] Dr. Eldridge of Yokohama in a paper published in the Pacific Medical Journal, December, 1880, and January, 1881, on Kakké, or Japanese Beri-beri, states that the pulse indicates tension always; but in a note at the end of his paper he writes that this is not always the case, though true in most cases in earlier stages; though in some acute and imminently dangerous forms the opposite condition prevailed. With regard to the cause of the low-tension pulse I am not sure that Dr. Eldridge and I agree, but in the clinical association of low-tension pulse and imminent danger we certainly do.

failure with loss of temperature by the subcutaneous injection of digitalin and the application of external warmth to the patient, and I hope that he will before long make these results known. It is conceivable that the active principle of digitalis might, in its capacity of a direct heart tonic, be of service in these cases, but care would have to be exercised not to press the drug too far. However, if by the first effect of digitalis one could keep the heart going until the danger were passed, the requisite object would be attained, and any hope of a successful, or even fairly successful, method of treatment being discovered tends to make the prognosis less gloomy than I have hitherto thought it. Drugs that act on the bowels and the kidneys must, of course, be used in the treatment, for they tend, by relieving the pressure on the circulation, to lessen the distress in both the conditions I have described.

Singapore, Straits Settlements.

A CASE OF GASTRIC PERFORATION.

BY G. E. ANSON, M.D., B.C. CANTAB.

A WELL-DEVELOPED, well-nourished, active, fairly healthy but anæmic young woman aged twenty while attending church on Sunday evening, Sept. 11th, 1892, was suddenly seized with severe pain below the ribs on the left side. She felt very faint, but was able to walk out of church; she was, however, unable to walk home and had to be carried there. For the past eighteen months at various times she had been treated for anæmia, with dyspepsia, vomiting, shortness of breath, pallor, palpitations and amenorrhœa. The treatment had been on the whole successful, but latterly she had been "running down" again. The symptoms of late had not been severe; they were weariness, amenorrhœa, slight nausea after meals, little or no vomiting and practically no gastric pain. During the few days prior to the attack she "had not been feeling quite well," but there had been no pain and no vomiting.

I was sent for at 8 P.M., and on my arrival I found her lying flat on her back on the floor, breathing shallowly and rapidly, with signs of great collapse, her face ashy white, dark rings under the eyes, the pupils widely dilated, and the pulse running, compressible, 140, and so feeble as to be barely perceptible. She complained of sharp, lancinating pain in the gastric region, aggravated whenever she moved or took a deep breath. On examination I found the upper part of the left rectus hard, tense and resisting, and great pain was caused on attempting deep pressure. The lower part of the left rectus was less tense, but still more so than its fellow of the other side. The whole right side of the abdomen was soft to the touch, neither tender nor painful, and apparently normal. The pelvic regions were explored thoroughly by palpation and percussion and by rectal and vaginal examination, and all the conditions were found to be normal. Over the whole abdomen the resonance was normal, as was the liver dulness. The heart and lungs were also normal. The temperature was 98°; the tongue was dry and furred.

Suspecting that this was a case of gastric perforation, I ordered the patient to be carefully carried upstairs and put to bed; twenty-five minims of liquor opii sedativus in a tablespoonful of diluted brandy were administered. Directions were given that hot fomentations were to be constantly applied to the painful part of the abdomen and that nothing was to be given by the mouth except a very few teaspoonful sips of weak milk-and-water, to allay the great thirst. Early next morning I found that she had passed a night of acute abdominal pain, not spasmodic, and that at about 2 A.M. her abdomen had become enormously distended (whether suddenly or not I could not satisfactorily ascertain). She had had constant painful eructations of flatus during the first half of the night, which became less and gradually ceased in the early morning as the distension increased. There had been no vomiting, no tenesmus, no flatus, and no motion or discharge of any kind from the bowels. Urine had been freely passed. On examination I found that the abdomen was enormously and evenly distended, very tense and uniformly tympanitic right down to the flanks; no coils of intestine or peristaltic action could be made out; the liver dulness had disappeared; there were large veins visible over the whole abdomen; the breathing was shallow, rapid and entirely thoracic; the tongue was thickly furred and dry; there was very little pain; the temperature was 98°; the pulse 140, feeble, running and very compressible. The symptoms now pointed still more strongly to perforation of the stomach. The chief points in favour of this diagnosis were: (1) a long history of anæmia, amenorrhœa, dyspepsia and gastric pain; (2) the suddenness of the attack, the locality of the pain and the profound collapse; (3) the locality of the tenderness, with the rectus "in arms" to guard the tender spot; (4) the obliteration of the liver dulness after the distension had set in, which Senn considers to be an absolute proof of distension, being due to extra-intestinal gas, which separates the upper surface of the liver from the diaphragm and drives that viscus backwards.

I felt that immediate operative interference was called for, as giving the patient the only chance of life, though a poor one. Under these circumstances I asked Dr. Collins to see her with me. He agreed with the diagnosis, but as there was just a shade of possibility that there might be some form of obstruction we agreed to postpone operation for a few hours. An attempt was to be made in the meantime to pass the long rectal tube. This I could not accomplish, the tube refusing to ascend more than five or six inches, probably owing to the great distension. Towards evening, her condition being in no way improved, I decided to have another consultation, and asked Drs. Martin and Collins to meet me at 8 P.M. Meanwhile I prepared everything for operation. On fully considering the matter we decided to operate (twenty-four hours after the attack began). The patient having been put under the influence of chloroform by Dr. Martin, I proceeded to make an exploratory section. An incision of about five inches in length was made in the linea alba immediately above the umbilicus. On reaching the peritoneum this was picked up with a forceps and nicked, when an enormous amount of odourless gas escaped and the abdomen collapsed to its normal dimensions. This tended to confirm the diagnosis of gastric perforation, for two things were evident: (1) that the distension was due to extra-intestinal gas, and (2) the gas, not being foul, had not escaped from the bowel. The peritoneal incision was enlarged with a blunt bistoury, and was rendered T-shaped by a transverse incision through the left rectus, as the original incision was not large enough to allow of a thorough examination of the stomach. The bowels were found to be more or less empty, and there was a fair amount of fluid, thick with flakes of lymph, in the peritoneal cavity. The intestines were bright, and little or no lymph was adherent to them. When this had been sponged away, a good deal of lymph was found adherent to the anterior surface of the stomach and the lesser omentum. This was soft and evidently recent, as it was easily removed. Beneath this, on the anterior surface of the stomach-wall, just above the lesser omentum, there was a small darkish spot, about the size of a hemp-seed, through which a grooved director passed easily into the gastric cavity, and some of the contents of the stomach flowed out along the groove. The patient being collapsed, there was no time to close the perforation by an elaborate set of Lembert's sutures, so two fine silk sutures were passed at right angles to each other through the serous and muscular coats and tied. A careful search was made on the anterior as also on the posterior surface by drawing up and reflecting the great omentum, but no further perforations were found. The abdominal cavity was well flushed with hot boracic solution and the superficial wound closed by silk sutures. A small incision was made about two inches above the pubes, through which a rubber drainage-tube was passed into Douglas' pouch and fastened to the lips of the wound. After a further flushing with boracic solution the abdomen was dressed with corrosive sublimate wood-wool and the patient removed to bed. As she was much collapsed she was surrounded with hot bottles; a half-grain morphia suppository and an ounce of brandy enema were administered. Directions were given for her to have nutrient enemata containing half an ounce of brandy every three hours. She passed a fair night, without pain, rather restless and more or less conscious, but she did not rally, and finally sank and died at 10 A.M., about thirty-eight hours after she was first attacked. It was, unfortunately, not possible to obtain a necropsy.

Remarks.—The difficulty of *certain* diagnosis in cases such as this will often lead the surgeon to let slip the opportunity of probable success which the first few hours offer. It is very hard to be *sure* that an accident of such comparative rarity has occurred, or, at any rate, to be sure enough of it to warrant the adoption of such a measure as abdominal section. It will always be very hard to induce the friends to realise the extreme gravity of the situation and to overcome their

unwillingness to submit the patient (who, in their opinion, is only suffering from a fainting fit and a stomach-ache, due probably to indigestion) to all the risks of such a severe operation. The diagnosis is so hard that it is important that every case, successful or not, should be accurately recorded for future guidance. I believe it to be essential to success that the operation should be performed before much of the gastric contents has invaded the peritoneal cavity, before distension and general peritonitis have set in, and before the collapse has lasted too long. In this case these symptoms came on in six hours; the operation was performed twenty-four hours, and death occurred thirty-eight hours, after the attack. The operation should therefore be performed within the first three or four hours. If that is done, I see no reason why an equal amount of success should not attend this operation as attends that for the repair of ruptured bladder. In these days of antiseptics an abdominal exploratory operation is not so serious a matter as it used to be, and a patient should certainly be given the chance of cure which it affords; and even when the first four golden hours have passed there is a hope, though a forlorn one, that operative interference may be successful. Without operation I believe the patient is under the doom of certain death within forty-eight hours (or three days at the most). Senn describes a method of diagnosing this lesion by inflating the stomach with hydrogen gas until the whole abdomen is distended. If there is a perforation anywhere in the stomach or intestinal tract the gas will escape into the peritoneal cavity, which is shown by the disappearance of the liver dulness. However, an apparatus for this is not always at hand and requires time to arrange; and whilst these preparations are being made, whilst the friends are hesitating and other surgeons are being called in, and the nurse is being procured &c., the favourable time has passed.

Wellington, New Zealand.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

LIGATURE OF THE EXTERNAL ILIAC ARTERY FOR SECONDARY HÆMORRHAGE AFTER AMPUTATION OF THE THIGH.[1]

BY ARTHUR C. DE RENZI, M.R.C.S. &c.,
RESIDENT SURGEON TO THE CHRISTCHURCH HOSPITAL, NEW ZEALAND.

A LABOURER aged twenty-seven was admitted to the Christchurch Hospital, New Zealand, under the care of Dr. Stewart, suffering from extensive scrofulous disease of the knee-joint. The patient was in very poor health at the time, moist râles being heard over the upper half of the right side of the chest. Dr. Stewart performed excision of the knee. The joint on being opened was found to be extensively diseased; both articular surfaces were deeply ulcerated and all traces of cartilage gone. General oozing of blood gave rise to considerable trouble after the operation. Though every care was taken as regarded the antiseptic treatment of the case it soon became apparent that the patient's strength was not equal to the strain put upon it, and, as the lung mischief was extending rapidly, amputation above the middle of the thigh was determined upon and performed by Dr. Stewart on Dec. 12th, 1891. The whole thigh was in a very unhealthy condition, being nearly twice its natural size, hard and œdematous. General oozing again gave rise to anxiety as the patient was in a particularly bad state of health and could not bear much loss of blood. A carbolic gauze dressing was applied to the stump, which healed by first intention, with the exception of the outer angle of the wound, where the drainage-tube had been placed. On the 19th, seven days after the operation, I was suddenly summoned to the ward to see the patient. I found that there had been most copious hæmorrhage from the opening in the stump left by the drainage-tube. The patient was completely blanched and the bed was saturated with blood, though the head-nurse had immediately on noticing the bleeding applied an elastic tourniquet. From the sudden onset and amount of the hæmorrhage it was clear that the femoral artery had given way, probably owing to ulceration at the seat of the ligature (chromicised catgut) due to the unhealthy condition of all the tissues of the limb. Being unable to obtain the assistance of Dr. Stewart, under whose care the patient was, I determined that, on account of the unhealthy state of the tissues of the thigh, any attempt to open up the stump and secure the artery would almost certainly have been followed by a recurrence of the bleeding. I therefore decided that under the circumstances it would be better to at once apply a ligature to the external iliac artery. The patient was accordingly put under ether and the artery exposed by a semilunar incision above Poupart's ligament carried up beyond the spine of the ilium. The epigastric artery was avoided, as was also the genito-crural nerve, which was seen near and superficial to the artery; the vessel itself was ligatured with a stout piece of chromicised catgut. There was no bleeding whatever during the operation, and all hæmorrhage from the stump was completely arrested. The wound healed by first intention, and the patient made a rapid recovery; his lung trouble has quite disappeared and he looks in good health.

This case is interesting from the fact that in these days of antiseptic surgery secondary hæmorrhage is so seldom met with. During the five years that I have been resident surgeon to the Christchurch Hospital, where the number of major operations performed annually is very large, this is the only case in which secondary hæmorrhage occurred. In this case I think it is clearly to be attributed to the unhealthy condition of the limb—certainly not to any fault in the management of the case after operation. The idea of septic mischief was out of the question, for in neither instance did the temperature rise beyond 99·6°, and it was most usually normal. Another point worthy of notice is this: namely, that for the first fortnight after amputation it is a good and a safe plan to have an elastic tourniquet near the patient. I always have one hanging at the head of the bed. In this case the patient would most probably have lost his life had not the nurse had such efficient means for the arrest of hæmorrhage within her reach. The way in which the lung mischief cleared up after the removal of the diseased limb was also very striking.

[1] A paper read before the Canterbury Branch of the New Zealand Medical Association.

REMARKABLE CONTENTS OF A LEFT INGUINAL HERNIA; DEATH FROM RUPTURE OF SMALL INTESTINE.

BY GEORGE W. F. MACNAUGHTON, M.B., C.M. EDIN.

A MELANCHOLIC PATIENT aged thirty-one, in the Worcester County and City Lunatic Asylum, half an hour after breakfast on Jan. 16th, 1893, complained of cramping pains in the abdomen, and vomited. On being visited, he was lying partly on his back and partly on his right side. His face suggested collapse; his pulse, however, was regular, although of low tension, and his extremities were warm. The pains were occurring over the abdomen generally and were not specially localised. On examination the hernia was found to be very tense. No attempt at reduction by taxis was made. Hot fomentations were applied, a solution of two quarter-grain sulphate of morphia tabloids in distilled water was injected hypodermically, and a small enema, containing one drachm of spirits of turpentine, was administered. The bowels moved gently thereafter. Pain ceased and the patient, who had been tossing about, became more quiet, and appeared to be more comfortable. He continued in this state until 2 P.M., when he again became restless, and on attempting to sit up in bed fell back in a fainting condition. Restoratives were applied and he rallied temporarily. The pulse never regained strength, the extremities became cold, and he died at 3.40 P.M. The interest of the case centres round the results of the post-mortem examination, which are briefly noted below. Body pale and waxy-looking; abdomen distended; the scrotum was represented by a large pear-shaped swelling, measuring seventeen inches in circumference and ten and a half in length, from its point of issue in the hypogastric and left inguinal regions. On opening the abdomen the coils of the small intestine appeared as if floating in blood. The walls of the intestine were congested and moderately distended.

On following up the line of the bowel into the left lumbar region an irregular transverse rupture on its attached margin, capable of admitting two fingers and opening directly into the peritoneal cavity, was found. There was also a comparatively large extravasation of blood passing between the layers of the mesentery. The ileum, for fully four feet below this level, until it passed into the hernial sac, contained blood and mucus. On reflecting the skin from the hernial swelling there was a fibrous sac beneath, which on puncture exuded from five to six ounces of a muddy serous fluid. On completely laying bare the contents these were found to consist of nearly three feet of healthy small intestine, the cæcum with an elongated vermiform appendix, five inches of the ascending colon and a considerable portion of the mesentery. These portions of gut did not contain any bloody fluid and were distended with gas. There were no signs of strangulation, and no adhesions existed at any point. Crossing the neck of the sac were two tense bands of fascia, representing the displaced inner pillar of the external abdominal ring. The fingers could pass freely beneath these into the abdominal cavity.

Powick, near Worcester.

RAPID PRODUCTION OF PURPURA AFTER SMALL DOSES OF IODIDE OF POTASSIUM.

BY TOM ROBINSON, M.D. BRUX., M.R.C.S. &c.

A MAN aged sixty-three consulted me on Feb. 8th for symptoms which seemed to be attributable to uratosis, and for which he was ordered the following mixture, to be taken three times a day: ten grains of chloride of ammonium, one grain of iodide of potassium and one drachm of infusion of rhubarb. After the first six doses he was conscious of irritation in his eyes, nose and throat. On the 14th, six days after commencing the treatment, he noticed a rash on his arms and was quite sure the eruption came on the arms first. On the 15th, on inspection, the following appearance was observed. There was a copious mottling of the legs extending on the posterior aspects to two inches above the knees and on the inner side of the thigh up to Poupart's ligament. On the arms there was a similar condition, the eruption being limited to a slight distance above the elbow-joint; it was here much more obvious on the inner borders. The trunk, face and hands had escaped. The eruption consisted of irregular-shaped blood extravasations, which gave to the area attacked an appearance singularly like that which is seen on the white apron of a person manipulating black currants and on which the juice has splashed. The type of the eruption was exaggerated on the legs and it was impossible to attribute any regular shape to it. There was neither itching or pain present. There was one curious association of circumstances, which was that the patient had a port-wine mark on the inner surface of the right arm. There were no visible extravasations in the mucous membrane of the mouth and the man expressed himself as feeling quite well.

This case belongs to the group of eruptions which may be called "drug purpura." It has long been recognised that many conditions of the blood *per se* will be such that the red corpuscles and liquor sanguinis find their way through the walls of the bloodvessels; and it has also become an accepted fact that this escape may be, and commonly is, attributable to changes in the walls of the bloodvessels themselves. Experience demonstrates that errors in diet, physiological states and atmospheric influences may all lead to changes in the sympathetic nerve centres which will permit of the development of purpuric extravasations. Dr. Tilbury Fox, records in THE LANCET of Feb. 7th, 1874, how he saw hyperæmia and extravasation produced in the skin after the inhalation of four grammes of tincture of benzoin, and Professor Fournier related in 1877 a series of cures in which purpuric spots appeared after the administration of iodide of potassium; but it is to Mr. Hutchinson that we are indebted for bringing before the profession the often serious results of administering the iodides in those who cannot tolerate that drug. Mr. Hutchinson[1] relates the case of a man who was threatened with impending suffocation owing to the swelling about his neck and throat after only two or three doses of the drug had been taken. Dr. Stephen Mackenzie also relates a case in which an infant five months old died of iodic purpura after a single dose of two grains and a half. The thought has frequently suggested itself to my mind that many of the vague, nondescript nervous manifestations which are so commonly met with in the last stage of constitutional syphilis may be due to these blood extravasations occurring in the very centre of the nervous system. In such situations it is easy to understand how the slightest departure from the vascular integrity of the part may produce manifestations which in any other structure would be almost without symptoms, and it is well to watch carefully those to whom iodide of potassium is being administered. It is astonishing for how long a time some individuals will continue to saturate themselves with the salt. This is not the time to endeavour to sketch the varied phenomena which iodic eruptions present to us; neither is it necessary to do more than allude to the fact that all the bromides are capable of producing many and varied cutaneous conditions.

Prince's-street, Cavendish-square, W.

[1] Pedigree of Disease, p. 54.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

PYÆMIC THROMBOSIS OF THE LATERAL SINUS FOLLOWING ACUTE OTITIS; SINUS OPENED AND INTERNAL JUGULAR VEIN DISSECTED OUT; RECOVERY; REMARKS.

(Under the care of Dr. URBAN PRITCHARD.)

IT is important that examples of the successful treatment of this dangerous condition should be placed on record; for not only does the publication of a successful case tend to the encouragement of operation, without which the patients invariably die, but it spreads a knowledge of the symptoms indicating the presence of the thrombosis, for which the operation is required. There are various slight modifications made from time to time in the details of this operation; but the objects to be attained are (1) removal of the source of infection and (2) the blocking of the main route by which anything from the infected part would enter the general circulation. Dr. Pritchard refers to the absence of recent discharge and to the caseating character of the pus in the mastoid process, both important as indicating the onset of the thrombosis from a chronic latent condition. The membrana tympani was not perforated, there was no œdema over the mastoid process, nor could optic neuritis be found on examination with the ophthalmoscope. The case is one from which much may be learned, and we congratulate Mr. G. Lenthal Cheatle, by whom the operation was performed and to whom we are indebted for the notes, on the success which he obtained.

A girl aged thirteen was admitted into Twining Ward at 1.30 P.M. on Nov. 5th, 1892. The following history was given by Mr. E. K. Macartney, who, recognising the gravity of the case, sent her into the hospital. During infancy and early childhood there had been a purulent discharge from the ears; this gradually ceased, and none had been noticed for several years. In other respects she had always been healthy. Eight days ago, without obvious cause, the child began to complain of earache and headache on the left side, with pain in the upper part of the neck on the same side on movement. These pains gradually increased in severity, became constant and agonising, and prevented sleep. Vomiting was an early and distressing symptom. Rigors developed, sometimes two or three a day, and twitchings of the right leg were said to have been noticed during sleep. Mr. Macartney could discover no signs of optic neuritis.

On admission into the hospital the patient was found to be a thoroughly well-developed and strong-looking girl. She was very restless, but answered questions quite reasonably and connectedly. She complained of intense earache on the left side and pain over the same side of the head posteriorly to the ear; this pain extended downwards to the upper part of the neck. The right ear was apparently quite normal. The

condition of the left ear was as follows: The pinna was in normal relation to the side of the head; there was no redness, swelling or œdema of or about the ear—in fact, on mere inspection, nothing appeared abnormal. Within an area of two inches and a half posteriorly to the pinna gentle percussion with the finger gave rise to pain, but not of an intense character. Pain of a more severe type was caused by digital examination of the upper part of the neck, which was then seen to be slightly swollen, but no fluctuation could be detected. The membrana tympani was dry, and the vessels accompanying the handle of the malleus were congested; there was no marked bulging. The watch was heard at a fairly normal distance on the right side and at $\frac{6}{10}$ in. on the left. There was no optic neuritis. The urine had a sp. gr. of 1009, and did not contain any albumen. Every other organ and viscus appeared to be quite normal. The temperature at 1.30 P.M. was 102°; pulse 116; respiration 44.

In Dr. Pritchard's absence the case was seen at 8.30 P.M. by Mr. Cheatle, and as there had been no rigors and there were some indications of improvement he decided to postpone operative interference. Five grains of calomel were administered. At 10 P.M. the temperature had risen to 105°, with the pulse at 120 and respiration 40.

On Nov. 6th the temperature during the day remained above 103°, and at 6 P.M. reached 104·6°, with the pulse at 124 and respiration 44. Mr. Cheatle saw the patient again at 6 P.M., and as the pain and temperature were still very serious elements in the case it was decided to operate upon the following lines: (1) To chisel into the mastoid antrum; (2) if necessary, to open up the mastoid cells; (3) if nothing deemed sufficient to account for the symptoms could then be found, to chisel backwards and open up the lateral sinus. The patient was anæsthetised, the hair cut, the left side of the head shaved and purified by scrubbing with a nail-brush, soap and a carbolic solution (1 in 20). The left external auditory meatus was syringed out with a carbolic solution of the same strength. A curved incision two inches long was made a quarter of an inch behind the pinna of the left ear, the periosteum detached and the mastoid antrum opened by means of the chisel and mallet. On the first introduction of the chisel into the antrum gas bubbled out with the blood. The opening thus made was enlarged, during which process a few streaks of thick pus came away, but there was no distinct evacuation of any collection. Scraping with a sharp spoon only removed old cheesy degeneration without offensive odour, and it was thought that so far the cause of the severe symptoms had not been revealed; it was therefore determined to examine the lateral sinus. An incision was accordingly made backwards from and at right angles to the preliminary cut. The opening in the skull was enlarged upwards, backwards and downwards. More cheesy matter was scraped away, and as the dura mater covering the temporo-sphenoidal lobe bulged considerably into the upper part of the aperture this membrane was opened and a carefully purified exploratory needle was passed into the brain substance in search of pus, but with no result; the incision into the dura mater was accordingly reunited with a fine catgut suture. After a little more chiselling the lateral sinus was completely exposed. Into it the purified needle of a hypodermic syringe was inserted, but no blood or pus could be drawn up, and on withdrawing the needle it was found to have a very offensive odour. The outer wall of the sinus was next thoroughly opened by a longitudinal incision, and on scraping out the contents fetid gas bubbled up. A probe was then thrust upwards towards the torcular Herophili and downwards towards the internal jugular vein, but no blood could be made to flow, and on withdrawal the probe had a most offensive odour. The next step was the ligation of the internal jugular vein and an incision was made from the angle of the jaw to the cricoid cartilage, but on account of the matting together of the enlarged and inflamed glands this incision had subsequently to be enlarged. The vein when exposed appeared to be collapsed; it was tied in two places and divided between the ligatures. The operation had already lasted two hours and a half, so it was thought desirable to finish as quickly as possible. The lateral sinus was again scraped with a sharp spoon and syringed out with a solution of perchloride of mercury (1 in 3000), in the hope that by these means the original source of infection would be removed. The temperature at midnight was 97·4°; pulse 140; respiration 44.

Nov. 7th.—The pain has subsided; there has been no vomiting or rigors. She takes nourishment well and feels much better. Urticaria over the chest and the arms was noticed this morning. The temperature during the day remained slightly under the normal. The pulse fell from 136 at 4 A.M. to 96 at 10 P.M. and the respiration from 40 to 32 respectively.

8th.—At 6 A.M. the temperature was 102·2°, and at 10 P.M. 101·6°. Except for the temperature, the condition continued much the same as yesterday.

9th.—The temperature at 10 A.M. was 101°, at 2 P.M. 103·4°, and at 4 P.M. 103·6°. At 4 P.M. Dr. Pritchard decided that as the temperature was gradually rising the internal jugular vein should be dissected out and the opening in the skull enlarged. The patient was again anæsthetised, and as Mr. Cheatle had performed the preliminary operation Dr. Pritchard requested him to undertake the second. The horizontal incision above described was prolonged a little backwards, and the opening in the skull was enlarged, particularly in a backward and downward direction, where the dura mater had become separated from the skull, and where, too, a dependent position for drainage could be best obtained and the burrowing of inflammatory material towards the cerebellum prevented. (During the performance of this part of the operation the facial nerve must have been injured, notwithstanding the care taken to avoid this accident.) The lateral sinus thus further exposed was laid open, the clotted offensive contents scraped out with a sharp spoon and the outer wall entirely removed, so that the sinus was practically obliterated. The upper end of the sinus was allowed to bleed for a few seconds in order to clear away as much as possible the remaining offensive clots; hæmorrhage was easily controlled by light pressure. The wound in the neck was then reopened and the internal jugular vein dissected out as far as possible in the direction of the skull. A solution of perchloride of mercury (1 in 2000) was syringed from the remains of the sinus through the remnant of the internal jugular vein into the wound in the neck; much offensive clot came away during this process. The wound in the neck was sutured and the whole dressed with cyanide gauze. At 7.15 P.M. the temperature was 97°, at 10 P.M. it had risen to 99°. The patient slept during the night.

10th.—The temperature at 6 A.M. was 100°, at 10 P.M. 99°.

11th.—The temperature at 6 P.M. was 98·6°. The wound, which had been dressed daily, looked healthy. The patient suffered no pain and looked and felt quite well. This continued until noon of Nov. 12th, when the child had a rigor, with a temperature rising to 104·2°. This was found to be due to a collection of discharge in the resutured cervical wound; the stitches were accordingly cut and the wound opened up. On the afternoon of the following day the temperature reached 103°, from which point it steadily declined, and by Nov. 20th it became normal and did not subsequently rise. The long wound healed from the bottom, there were no further bad symptoms, and the patient was sent to a convalescent home on Jan. 27th, 1893.

Remarks by Dr. URBAN PRITCHARD.—In this case there are several points of special interest, in addition to its being another successful case of operation for septic thrombosis of the lateral sinus. The long time that the mastoid disease remained dormant, as indicated by the history, corroborated by the cheesy material removed; the sudden onset of the acute symptoms, the absence of meningitis and cerebral disease—the case was practically an uncomplicated one of extension of the septic process from the mastoid to the lateral sinus; the operation was followed by complete recovery, in spite of the advanced septic condition of the contents of the sinus and vein. As regards treatment, this case illustrates the importance of being prepared to extend the operation if no sufficient cause for the symptoms can be discovered on simply opening the antrum; and hence, before commencing the operation, it is of advantage to lay down a general plan of the course to be pursued. For instance, the antrum should first be opened; if there are no signs of tension there, the mastoid cells ought to be opened next; if the grave symptoms are still unaccounted for, the cranium over the lateral sinus should be opened and the sinus examined; if septic contents are found in the sinus, the internal jugular vein should be tied, the sinus laid open, and an endeavour made to clear the vein by syringing right through from the vein to the sinus, clearing the upper end of the sinus until it bleeds fairly freely; if unable to clear the vein of its septic contents, it may be necessary to dissect it away; if any extra-dural abscess be found, if possible remove all bone separated from the dura mater by it, to prevent burrowing. If on opening the cranium the dura mater bulges into the opening, and especially if symptoms of cerebral abscess exist, the cerebrum should be carefully searched for collections of pus; or even, though with greater care, the cerebellum may be explored. Lastly, it should never be forgotten that

even if nothing is found to account for the grave symptoms, the operation itself, involving as it does removal of bone and considerable local depletion, will in a fair proportion of cases arrest the symptoms, the patient making a good recovery.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

ACUTE OSTEO-MYELITIS OF UPPER HUMERAL DIAPHYSES; DOUBLE RESECTION; RECOVERY.

(Under the care of Mr. EDMUND OWEN.)

THESE cases of acute suppuration of joints, dependent upon an osteo-myelitis of one of the bones entering into its formation, are amongst the most interesting of the diseases met with in children. Starting in the vascular tissue near the end of the diaphysis (usually the lower end of the femoral or upper end of the humeral diaphysis), a part which in infants may be regarded as intra-articular, the course of the disease is very rapid and only too frequently terminates in death. If the surgeon who is called upon to take the responsibility of the case recognises its nature and appreciates the importance of immediate operative interference a good result may be obtained, the life of the child being saved and the usefulness of the joint ensured. There is, however, such a close relationship between this disease and pyæmia that much anxiety must always exist during the early part of the illness lest general infection of the system should develop. This patient, who was shown at the meeting of the Medical Society on the 27th ult., is a good instance of the result of surgical treatment.

On June 3rd, 1892, a male child two years and a month old was brought into the hospital in a state of extreme exhaustion. The mother said that a little more than a fortnight previously he had had a series of "fits"; that since then he had been feverish and unable to eat, and that on the day before his admission she had noticed that the shoulders were swollen, hot and painful. On admission the child was found to be somewhat rachitic, very anæmic and ill. The temperature was 104·4°. The skin over each shoulder was tense, red, shining and hot, and marked with distended veins. Fluctuation could be obtained across the joints. The case was diagnosed as one of acute septic inflammation of the upper end of each humeral diaphysis, with implication of the shoulder-joints. The child was, therefore, at once taken into the theatre, and when he was anæsthetised Mr. Owen opened one abscess by cutting through the deltoid, whilst the surgical registrar, Mr. Wagstaff, did the same for the other. On both sides the joints contained pus, the cartilage of the humerus being soft and extensively destroyed. The head of each humerus was resected and the end of the diaphysis was scraped out. The joints were then washed out with a solution of chloride of zinc, drainage-tubes being inserted. The wounds were dressed with wood wool and the arms were fixed to the side. The child made an uninterrupted recovery, the joints becoming freely movable.

Remarks by Mr. OWEN.—Acute septic osteo-myelitis is one of the most serious conditions which can be met with in children. The inflammation is usually preceded by an injury which has lowered the vitality of the bone, or by some fever which has left the child in an enfeebled condition, so that the micrococci (which are probably lurking in or about every child) are enabled to obtain a firm foothold in, and spread devastation through, the tissue. The delicate new bone at the end of a diaphysis is the favourite seat of the disease, and in very little children the neighbouring joint may be quickly involved. So often, indeed, does this happen that these cases were once grouped together to form, as it were, a special disease, under the name of "acute arthritis of infants." Subsequent experience has shown, however, that there is no need for such a classification. The lesion is not primarily a joint disease, nor is it an epiphysitis. It is at first a diaphysitis close to the junction cartilage. Perhaps the best name for it is "para-epiphysitis." Not a few of the subjects of the disease die outright from shock, whilst others succumb to acute blood poisoning. If recovery does take place, it is usually at the expense of the joint, if not of the limb. The simultaneous affection of the two shoulders, as recorded above, points, I think, to the constitutional origin of the trouble (as opposed to that of local injury); whilst the recovery of an apparently moribund infant after resection of the upper extremity of each humerus shows once more the importance of prompt and vigorous treatment in every case, however apparently hopeless.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Fracture in connexion with Tabes Dorsalis, Syphilis and Paraplegia.

AN ordinary meeting of this Society was held on Feb. 28th, the President, Sir Andrew Clark, in the chair.

Mr. WALTER RIVINGTON read a paper on some cases of Fracture of Long Bones from Slight Causes in connexion with Tabes Dorsalis, Syphilis and Paraplegia. He related five cases of fracture from slight causes in patients suffering from tabes and one case of fracture in a patient with paraplegia of fifteen years' duration and atrophy of the lower limbs. Of the five cases of tabetic fracture all were in the vicinity of joints—one at the surgical neck of the right humerus, three at or near the neck of the femur (two on the right side and one on the left), and one of the right tibia and fibula three inches below the knee-joint. In two cases the fracture did not unite, both being fractures of the neck of the femur; in three union occurred (in two good union, and in one imperfect union). In two of the cases in which union occurred a large amount of callus was thrown out, as observed by Charcot in a case related in his published lectures "On Diseases of the Nervous System." In one case, seen several years after the original injury, the callus had been absorbed. The ages of the patients were respectively forty-two, forty-six, fifty-one, fifty-five, and fifty-seven at the time of the fractures. The fractures occurred, like the joint disease, in the prodromal stage of locomotor ataxy and before the onset of the ataxic symptoms, and were due to the same atrophy and rarefaction of the bones without inflammatory changes which were conspicuous in the articular ends of the bones in the joint disease. In two of the cases there was some history of syphilis, but there was no causal relation, in Mr. Rivington's opinion, between the fractures and that disease. "Spontaneous fractures" in syphilis generally arose from gumma. Cases of this kind related in former times passed unrecognised or were vaguely included under the head of fragilitas ossium or mollities ossium, and even now it was doubtful whether surgeons generally were sufficiently alive to the association of fractures from slight causes with locomotor ataxy. Charcot's ataxic joint disease was as familiar as a household word, but his ataxic fractures had not attracted the attention which they deserved.

Mr. HULKE read the notes of the case of a woman aged thirty-four in whom the lesions presented a close similarity to those of the first five of Mr. Rivington's. He pointed out that the pains in the lower limbs, associated with numbness, perforating ulcer and also with "gastric crises," clearly indicated the tabetic nature of the disorder. He drew attention to the relatively early age of the patient and the comparatively advanced phase of the nerve disorder when the fracture occurred, and also to the imperfectness of the union of the fracture, which led to a re-fracture by a yet slighter cause than that which produced the original break. The fracture was of the shaft of the tibia and was unassociated with disease of the joints.

Dr. BUZZARD remarked that more than ten years ago he published two cases of spontaneous fracture in connexion with tabes dorsalis. One very interesting question was the seat of the lesion in the central nervous system which led to spontaneous fracture in Charcot's joint disease. He mentioned these two together as M. Leoville had shown that in each precisely similar changes occurred in the bone. With reference to spontaneous fracture in tabetic patients he only referred to such cases as were rapid in onset. He mentioned that the late Dr. Benjamin Ball was the first to note the fact that visceral crises were very common in cases of tabetic arthropathy, and he said that the same fact had struck him independently. Before the Pathological Society in 1880 he

had ventured to suggest that gastric crises were strictly analogous to the lightning pains and were due to sclerosis of the nucleus of the vagus, a suggestion since firmly established as a fact. Again, in the Clinical Society's publication on Charcot's joint disease, in no less than twelve out of the seventeen cases had gastric crises been present, which showed that the vagus nucleus was affected. It was possible by the method of exclusion to demonstrate that spontaneous fracture or arthropathy was not due to disease of any part of the cord, because many cases of tabes occurred without them, and there was no liability to it in infantile paralysis or in sclerosis of the lateral or anterior columns, so that one was forced to look higher up, namely to the medulla, for the seat of the lesion. In confirmation of this he referred to a case of arthropathy of one knee and one hip which had been under Mr. Marcus Beck. The patient died suddenly, and Dr. Gowers examined the cord; he found no lesion proper to tabes, but in the bulb near the vagus and in the ascending root of the fifth nerve there was definite sclerosis.

Mr. J. HUTCHINSON, jun., said that it was to be regretted that there was no examination of the seat of fracture in the syphilitic cases, for there might have been a gummatous deposit there. In this connexion it should be remembered that gummatous osteomyelitis showed no local thickening and could not be recognised by external examination. Of twenty-seven cases of tertiary syphilis related by Chiara, no less than nine had central gummata in the long bones. He related a case of ununited fracture of the lower end of the radius associated with a central gumma which had existed for four years, but under the influence of iodide of potassium it united in six weeks, the union being so firm that the hand became a useful one. Over the lower end of the ulna in this case there was a malignant-looking but really gummatous ulcer, which healed up at the same time. Fournier had quoted a case of fracture of the clavicle in which, as in this case, there was extensive absorption of bone. Recent experience had shown that syphilis did not cause any direct extra fragility of bone, but only indirectly by gumma or nervous lesion.

Mr. W. H. BENNETT used intentionally the phrase "fracture due to slight causes" in preference to the term "spontaneous fracture." The tendency to fracture from slight causes was not limited to cases of tabes, and he related two cases in support of his contention. Both were those of ladies undoubtedly suffering from indeterminate nerve changes in whom multiple fractures occurred following slight causes. The fractures were remarkable in being typically transverse, and in neither patient was there associated joint disease or any tabetic symptom. He remarked on the wonderful immunity from fracture in patients paralysed on one side and asked if his experience was singular in this respect—namely, that he had never come across a case of fracture of a bone in a paralysed limb except when due to direct violence.

Mr. BARWELL remarked on the facility to fracture, unconnected with nerve lesion, which was occasionally hereditary, and he quoted two cases in illustration of this.

Mr. GOLDING-BIRD mentioned the case of a man who had been operated on for perforating ulcer of the foot, and who came to him with a relapse, when he elected to do a Pirogoff's amputation. The wound healed perfectly, but no bony union resulted although the limb could be used for progression. If it was a fact that there was a separate nerve centre presiding over the nutrition of bone tissue it was a remarkable one, for the above case showed that the other connective tissues were able to heal perfectly. His case, he thought, suggested that osteoplastic operations were unadvisable in cases of tabes.

Mr. BRYANT was not aware that he had seen more fractures in cases of tabes than in other forms of nerve lesion, though undoubtedly they were liable to be multiple in the former. He quoted the case of a bedridden woman, the subject of tabes, in whom simple movements in bed produced numerous fractures. In the event of general paralysis the bones frequently broke, but united again readily when put under favourable conditions.

Mr. RIVINGTON, in reply, thanked Dr. Buzzard for drawing his attention to the importance of visceral crises. He agreed that it was desirable to avoid the term "spontaneous," and he had omitted it from the title of his paper. He hoped that Mr. Hulke would allow the case he had related to be published along with his paper. The non-union that occurred in tabetic cases distinguished them from fractures in other kinds of paralysis. In tabes, if the fractures united, it was with excessive callus of low type.

MEDICAL SOCIETY OF LONDON.

Congenital Tumour of Chest Wall.—Leprosy undergoing Recovery.—Double Acute Osteo-myelitis of Shoulder-joints.—Stricture of Rectum associated with Pleurisy and Effusion.—Rupture of Urethra.—Enlarged Spleen.—Lupus of Face.—Nævus of Upper Extremity.—Dupuytren's Fracture.—Congenital Warty Growths of Hand and Foot.—Meningocele.

A CLINICAL MEETING of this Society was held on Feb. 27th, the President, Mr. Hutchinson, in the chair.

Mr. SHEILD showed an infant six months old, which had at birth a Tumour in its Pectoral Region. The tumour did not appear to communicate with the pleura, was partly lobulated, and was, he believed, a fibro-fatty growth.—The PRESIDENT had a drawing of a similar case. The rule was for these growths at a certain age to inflame and afterwards to shrivel. He agreed that it was inadvisable at present to operate on it.—Mr. EDMUND OWEN thought that there was a special implication of the lymphatics rather than of the bloodvessels.—Mr. HUTCHINSON, jun., had once assisted in removing one of these growths which extended up into the axilla and behind the clavicle; it was composed largely of lymphatic tissue.

The PRESIDENT exhibited a patient who was recovering from Leprosy and who had been under his observation for two or three years. He had lived abroad and had become the subject of ordinary leprotic patches on the hands and feet which had extended upwards. The ulnar nerves were so enlarged as to be easily felt. At the present time all the patches had disappeared, but the hands and feet were insensitive to heat and cold and also to pain. The treatment had been long continued, small doses of arsenic and the entire absence of fish from the diet. He had under observation another similar case which had also recovered as far as recovery was possible. Recovery was the rule in mild cases treated in the English climate with regulated diet. He held that a diet of fish was of primary importance in the production of the disease, and that, though English fish was not able to start the disease *de novo* in a healthy person, yet a fish diet contributed to its development.

Mr. EDMUND OWEN showed an infant which had suffered from Double Acute Septic Osteo-myelitis of the Humeri at their Upper Ends. He stated, in reply to Mr. Sheild, that the growing part of the epiphysis had been removed, but that this sacrifice had to be made in order to save the child's life.

Dr. DE HAVILLAND HALL and Mr. GOODSALL exhibited a woman, aged thirty-one, who had been operated on for hæmorrhoids and later for fistula. Three years afterwards a fibrous Stricture of the Rectum developed. Later still she contracted syphilis. This was followed by the appearance of a rash and an effusion into the left pleura. The latter was tapped thirteen times, the fluid withdrawn being perfectly clear. Later a left iliac colotomy was performed, and at present the stricture of the rectum was practically closed up, as a large-sized probe could not be passed through it. The effusion was thought to be due to a gummatous condition of the lung or pleura.—The PRESIDENT expressed his firm belief in mercury as the drug to stop most forms of chronic inflammation.

Mr. PEARCE GOULD showed a case of Traumatic Rupture of the Urethra in a man aged forty-one, who slipped from a ladder and fell astride an iron railing. On admission into the Middlesex Hospital the scrotum was distended and œdematous. A median incision was made, and the corpus spongiosum was found to be completely divided. A catheter was passed into the bladder, and the divided ends of the urethra were sutured together with silk. After the first night not a drop of urine escaped from the wound, the deep part of which healed by first intention. He referred to two other cases. The first case was that of a boy aged seven, in whom he sutured a completely divided urethra, and then closed the perineal wound, draining above the pubes; in this case the perineal wound healed at once. The second case was that of a man aged twenty-seven, who had bladder trouble which led to a digital exploration through a perineal wound. The wound was not sutured, but a firm pad was applied; nevertheless not a drop of urine escaped through it, and it healed by first intention. The cases illustrated the advisability of stitching together a ruptured urethra and showed that it was not necessary to leave the wound open, one of them demonstrating that though the urethra might be ruptured completely across, yet the

patient could pass urine as if nothing had happened.—Mr. SHEILD said that some time ago he wrote an article which was published in THE LANCET on this subject, advocating suture of the urethra with catgut stitches. The method was at present largely in vogue in the Paris hospitals.

Dr. E. CAUTLEY brought forward a young woman suffering from Chronic Enlargement of the Spleen. She was twenty-six years of age and the increase in the size of the spleen had been noticed since she was eleven. It now extended down to the iliac fossa. The red blood-corpuscles were only half their normal amount, and the proportion of white to red was as 1 to 100. There was no history of malaria or of hæmorrhages.

Dr. P. ABRAHAM showed a patient with an Eruption on the Face, which had proved refractory to treatment. He had regarded it as probably syphilitic because of the favourable action on it of iodides when first administered.—The PRESIDENT looked upon it as lupus rather than syphilis, because the latter was attended by more inflammation and less growth.—Dr. COLCOTT FOX regarded it as true lupus—a tuberculosis of the skin of the face.—Dr. HERON suggested the injection of tuberculin to make the differential diagnosis.

Dr. MONTAGUE MURRAY showed a man with Nævus of the Left Upper Extremity which had existed since birth and had spread on to the trunk, but was peculiar in being limited to the left side. The whole left limb was larger than its fellow and the muscles stronger, though the man was not left-handed.

Mr. J. HUTCHINSON, jun., showed a man with supposed Dupuytren's Fracture. The accident happened sixteen months ago and there was much difficulty in the reduction. The limb had been constantly and increasingly painful since. There was an increase of an inch and a half in the distance between the tibia and fibula at their lower ends, with only slight movement at the ankle-joint.—Mr. SHEILD and Mr. KEETLEY suggested excision of the astragalus.

Mr. SHEILD showed two further cases: one of Congenital Warty Growths of the Hand and Foot, and the second that of a Large Fungating Sore about the anus in an elderly man, which was at first regarded as epithelioma, but which had rapidly disappeared under antisyphilitic treatment.

Mr. STEPHEN PAGET exhibited a man with a Cured Meningocele in the situation of the posterior fontanelle.

CLINICAL SOCIETY OF LONDON.

Myxœdema treated by Thyroid Gland Feeding.—Congenital Luxation of Head of Humerus.—Tuberculous Ulceration of the Mouth.—Chancres of Lips.—Progressive Muscular Atrophy, with Bulbar Paralysis.—Peripheral Asphyxia, with Formation of Fibrous Nodules.—New Operation for Dorsal Dislocation of the Head of Femur.—Sequel to a case of Excision of the Head of Femur.

A CLINICAL MEETING of this Society was held on Feb. 24th, the President, Sir Dyce Duckworth, in the chair.

Dr. HECTOR MACKENZIE showed a woman aged forty, who had been suffering from Myxœdema, but who had been cured by feeding with thyroid gland. At first two whole glands were given for a dose, but this caused an immediate rise of temperature together with sickness. In a fortnight she had much improved and for the last six months she had been practically well.

Dr. HADDEN also exhibited a woman forty years of age, the subject of Myxœdema, who had been treated with thyroid gland powders. She improved very rapidly and in about a month she was practically well.

Mr. H. B. ROBINSON showed two cases of Congenital Luxation of the Head of the Humerus. The first was a child three years of age, and the head of the left humerus was displaced backwards, simulating a subspinous dislocation. In the second case, that of a child eighteen months old, both humeri were dislocated backwards, and when the arms were placed at the sides the palms of the hands turned directly outwards.

Mr. BARKER showed a girl aged fifteen with very extensive Tuberculous Ulceration of the Hard and Soft Palates of three months' duration. The teeth had become loose and some of them had dropped out. The patient was treated locally with iodoform, and cod-liver oil with tonics was administered internally. The ulceration had extended into the left nostril and was evidently an instance of inoculation from without.

Mr. GOULD exhibited a patient aged twenty-two who presented a Hunterian Chancre on the upper lip and a second and larger one on the lower lip, but not quite opposite to the first. There were several enlarged lymphatic glands.

Dr. HADDEN brought forward a man with Progressive Muscular Atrophy, who for the last two months had suffered from symptoms indicating an extension of the lesion to the medulla. There was paralysis of half the soft palate and of the vocal cords, accompainied by defective movement upwards of the eyeballs and difficulty in swallowing.

Dr. NEWTON PITT showed a woman aged twenty-four with extensive deposit of Fibroid Nodules on the Tendons and Fasciæ of the Fingers, forming indurated masses along the ulnæ, on the backs and palms of the hands, on the cartilages of the ears and nose, along the inferior margin of the lower jaw and on the forehead. The disease commenced with synovitis three months ago. Since Christmas she had had repeated attacks of peripheral asphyxia of the fingers, ears and tip of the tongue. There was no history of acute rheumatism.

Mr. W. ARBUTHNOT LANE read notes of cases illustrating a new operation for Dorsal Dislocation of the Head of the Femur and some points in the surgery of the hip-joint. He first read an account of a case of an acquired dorsal dislocation of the head of the femur of three years' duration in a boy aged seven, for which he had performed a novel operation. The head of the bone, which was much altered in form, could be felt to move freely upwards and downwards on the dorsum ilii, and by flexing the thigh forcibly it could be replaced in the acetabular cavity, but on attempting to diminish the flexion of the hip-joint the head again glided upwards out of the acetabulum, the whole of whose upper margin had disappeared. Owing to this great freedom of vertical movement of the head the gait of the child was very awkward and insecure, and there was much lordosis and shortening of the limb, to the extent of more than two inches. Acting upon a very important surgical principle, which he had described fully in a paper in the Transactions of the Medical and Chirurgical Society, 1888, entitled "An undescribed method by which the superjacent weight of the body is transmitted in united or ununited fracture of the neck of the femur through an acquired ilio-femoral articulation, and the bearing of the principle involved upon the surgery of the hip-joint." He divided all the muscles attached to the greater and lesser trochanters and to the upper part of the linea aspera, and near their origins he divided subcutaneously such of the adductors as afforded any resistance. It was found impossible to retain the head in the acetabular cavity. The thigh was then forcibly rotated inwards till the large mushroom-shaped head was made to project forwards and inwards. After having made an excavation in the ilium, immediately beneath the anterior inferior spine, Mr. Lane trimmed off the superabundant portion of the head, so as to leave a rounded extremity corresponding in size to that of the normal head. This he placed in the depression which he had made, and retained it in this position by means of a stout ligature passed through the tendon of the rectus and the anterior ligament at its attachment to the inter-trochanteric line. The result was most satisfactory. He went on to elaborate the principle demonstrated in the paper referred to, and then pointed out that when an individual lay at rest in the supine position the thighs were so placed that the inner margins of the feet contained between them a right angle, and that if in a dead body the neck of the femur was divided immediately beneath the head, and the thighs were rotated inwards till the inner margins of the feet lay parallel to one another, the diaphysial extremity of the neck was displaced backwards and upwards in the dorsum, whilst if the thigh was placed in its normal position of rest the stump of the neck rested against the head. If the thigh was rotated outwards beyond the position of rest the neck was displaced forwards beneath the anterior inferior spine, immediately in front of and above the transverse axis of pelvic rotation, its movement in this direction being limited by the capsule of the joint if this had not been divided. This fact applied, not only to division of the neck of the femur, but also to that of the shaft of that bone or of both the tibia and fibula and also to excisions and erasions of the knee and ankle-joint. He asserted that the position in which these several conditions were put up by surgeons—namely, with the whole leg or part of it in a position of considerable inward rotation—was bad both in principle and in practice, and tended to produce much deformity and sometimes non-union of

fragments resulted. In order to illustrate the truth of this most important surgical principle he confined himself to the case of the hip-joint. He had found that such cases of intra-capsular fracture, which he had examined after death, in which good bony union had ensued between the head and neck, or in which a secure and most useful joint had formed between the neck and innominate bone immediately beneath the anterior inferior spine, had the thighs rotated outwards to about or beyond the position of rest. He related two cases of intra-capsular fracture of the neck of the femur in young subjects which had been under his care, in both of which the fracture had escaped the observation of the surgeons at the time of the accident, and in which the patients were, therefore, fortunate enough to avoid the routine treatment to which they would otherwise have been subjected. The thigh was allowed to occupy a position of rest, or, in one case, to rotate a little beyond it by the weight of the limb, with most satisfactory results in both. He strongly urged surgeons to reconsider the customary treatment pursued in such surgical conditions of the lower extremity as involved the mobility of one of its sections upon another—namely, that of placing the lower segment in a position of considerable inward rotation. Both in intra-capsular fracture and in excisions of the head of the femur it was better to retain the neck in contact with the head in the one case and with the acetabulum in the other, and if this did not occur a secure joint could be obtained in front of the transverse axis of pelvis rotation, which was infinitely better than an insecure one behind it. These results could be readily brought about by putting the thigh up in the position of rest or by rotating it outwards beyond this position. The case was shown at a meeting of the Clinical Society in January, 1890, the operation having been performed in March, 1889. It resulted in a perfectly movable and very useful hip-joint. The child died of influenza, followed by acute tuberculosis, on July 12th, 1891. [The hip-joint was shown.] The specimen fully explained the success of the operation. At first glance it might be supposed that the head of the femur was still in existence, as the end of the neck was quite swollen, round and shining like an articular surface. The acetabulum, too, was smooth and united to the neck by strong fibrous bands. This accounted for the very small amount of displacement. There was a small focus of caseous material upon the inner surface of the ischium.—Mr. LOCKWOOD inquired if any cases of fracture of the upper end of the femur had been treated with the foot everted.—Mr. CLUTTON said he found, as a rule, that the foot was everted rather than inverted after excision.—Mr. SOLOMON SMITH thought the arguments used would not apply so well in cases of fracture, for the line of fracture might be so oblique that on eversion locking of the fragments would occur and the lower fragment be prevented from coming to the front.—Mr. BARKER agreed as to the desirability of getting the neck of the femur into the best position for progression. He added that fractures of the neck of the femur were almost invariably transverse and hence the difficulty mentioned by the last speaker was not likely to occur.—Mr. BOWLBY agreed that when the bone became fixed in the anterior position the patient walked better and there was not so much sliding movement. In intra-capsular fracture he imagined there would be great difficulty in placing the neck of the bone in the proper position.—Mr. A. T. RAKE referred to a case of fracture of the neck of the femur in which the leg was allowed to rotate outwards and in which an excellent result followed. He had lately examined thirty cases of old fracture of the lower extremity and in all of them the foot was more or less rotated inwards. He suggested that the foot-piece of the splint should be fitted in such a way as to allow some eversion of the limb.—Mr. ARBUTHNOT LANE briefly replied.

Mr. C. B. LOCKWOOD gave the sequel to a case of Excision of the Head of the Femur and Erasion of the Hip-joint through the anterior incision, with immediate and permanent closure of the wound.—Mr. CROFT remembered the case when it was originally brought forward, when the anterior incision was on its trial, and the result obtained was now proved to be excellent. It was very difficult to estimate the amount of suffering which had been spared to children in this and similar cases.—Mr. R. W. PARKER inquired if much bone had been removed. The less that was removed the greater, as a rule, was the success of the case.—Mr. BARKER believed that, as a rule, mobility was purchased at the expense of shortening the limb, and that the more fixed was the joint the better was the patient's progression.—Mr. LOCKWOOD, in reply, said that there were signs of commencing abscess in the joint when he operated, and he removed the entire head of the bone, though he kept within the capsule of the joint. He kept the patients at rest for two months and then allowed them to use the limb freely.

Reviews and Notices of Books.

The Hygiene of the Sick-room: a Book for Nurses and Others. By WILLIAM BUCKINGHAM CANFIELD, A.M., M.D., Lecturer on Clinical Medicine and Chief of the Chest Clinic, University of Maryland, Baltimore. Philadelphia: P. Blakiston, Son and Co. 1892

IN this little work Dr. Canfield gives what he describes as "a brief consideration of asepsis, antisepsis, disinfection, bacteriology, immunity, heating and ventilation, and kindred subjects for the use of nurses and other intelligent women." Although we may premise what we have to say with the statement that Dr. Canfield is somewhat exacting in his requirements from even good nurses, we consider that he has given in homely fashion a description of bacteria and of their *rôle* in medicine which cannot but be useful to intelligent women engaged in looking after the cleanliness of their wards and their patients.

In giving rules for the prevention and spread of infective diseases Dr. Canfield maintains that the essential factors are: keeping infective material from the ground—that is, from being deposited on anything; draining and keeping the ground dry, and to this end keeping a good surface on all floors, walls &c.—that is, one readily cleaned,—and by not disturbing the ground when it can possibly be avoided, especially in the neighbourhood of drains or during periods when infective diseases are rife; and, lastly, by keeping a water-supply perfectly uncontaminated with sewage of any kind. He points out the necessity of cooking vegetables, especially those watered with sewage, and of always boiling milk. As regards the various methods of disinfection, we think that he inclines rather to giving too numerous and too full descriptions without at the same time bringing into sufficient prominence the more important general and specific facts bearing on disinfection; nevertheless, his admirable descriptions might, in the hands of competent teachers, be made the basis of a most efficient system for disseminating the methods of disinfection, as he brings out at different points a number of facts which, if collected and sufficiently accentuated, would be invaluable. As disinfectants he specially recommends ventilation, heat, mechanical cleaning, 5 per cent. carbolic acid and quicklime. A short description of the various specific infective fevers, and good practical directions for the disinfection of the stools, clothing and rooms of patients suffering from these diseases are given. The chapters on the Bacteriology of Surgical Diseases and on Ophthalmia Neonatorum are both good. Altogether this is a useful work to put into the hands of thoughtful and studious nurses.

On Sledge and Horseback to Outcast Siberian Lepers. By KATE MARSDEN. Illustrated by Photographs and Drawings. London: The Record Press.

THE human interest pervading this book must of itself commend it to the attention of readers of works of travel, even if there were no praiseworthy features which belong to it from a literary point of view. All the civilised world must by this time have become familiar, at least by report, with the heroic self-sacrificing lady who, braving every peril and encountering untold hardships, set herself the task of succouring and alleviating, as far as in her lay, the misery of the victims to the horrible disease leprosy. With regard to certain statements in the book itself, it is natural that the

authoress should have been impressed by the kindness shown to her by those in high positions in Russia in desiring to forward by every means in their power the errand of mercy which she had voluntarily undertaken; but the thought will intrude itself on every mind engaged in the perusal of this narrative that the work of alleviating the misery of these wretched creatures should not have been left to the courage and energy of an individual, and that, moreover, one of the weaker sex. The resources of a so-called civilised State ought to be equal to the task of dealing more or less successfully with the desperate needs of a most forlorn section of its members. But let us pass on to the subject-proper of the book. Miss Marsden had heard of the existence of a herb capable of alleviating the sufferings caused by leprosy, but the knowledge of the name of the plant was, we are told, carefully concealed by those interested in the matter. The description of the garb adopted by the authoress, her experiences along the route she travelled, the risks and inconveniences attending the journey — all are recounted in an easy conversational style very pleasant to follow, whilst here and there the reader is stirred by a passage of deep pathos. At last we come to her description of Yakutsk, the settlement itself, which was reached on sledge and horseback alternately. Of the huts we must quote the account given by the medical inspector, M. Smirnoff:

"One is struck at the sight of the smallness of these nomad huts, in which they dwell. Light hardly penetrates, and the atmosphere is so infected by the conglomeration of the lepers and the exhalations of rotten fish that one is quite suffocated on entering them. These unfortunates have neither beds nor linen; their clothing consists only of sheep and cow skins, all in rags, and it is under these conditions, without any change, that they are obliged to live tens of years till at last death releases them from their sufferings. Not far from these huts one perceives graves with crosses on them, indicating the places where the lepers bury each other. The door is so small that one is obliged to bend to be able to enter. The hut is very low and hardly any light enters, and the atmosphere is so foul that even the fire, which is continually burning in the fireplace, cannot purify it. The filth of this hovel is disgusting; the dirty table and a few benches covered with filthy skins in lieu of beds comprise everything in the place. I found six men and three women huddled together in this infected hovel. It is inexplicable how so many people get to be lodged in so small and low a hut."

The *yourtas* or huts, swarming with vermin, are made out of trunks of trees fastened with wooden nails and covered with cow-dung, the floors being the bare earth. The lepers have no beds; round the inside of the *yourtas* are placed benches, and on these the lepers sleep, closely packed, the feet of the one against the head of the next. Men, women and children are indiscriminately mixed; there is no kind of sanitary arrangement, and in the depth of winter none of the inmates venture outside for days together. An account is given of a plan drawn up for the projected colony for lepers at Yakutsk. The Medical Department has appointed Professor Petersen to assist the authoress in making the necessary arrangements, and the plan has been finally decided upon. Criticism of such a book as the one under notice would be out of place, even if there were room for it. It is to be hoped that the design of the authoress—viz., that by the sale of the book additional funds may be raised in aid of the enterprise which has so far proved successful—may be realised.

The Past and Future: being a Second Edition, with Addenda of Saturn's Kingdom, or Fable and Fact. By CHARLES MOORE JESSOP, M.R.C.P., Deputy-Surgeon-General H.M.'s Forces (retired). London: Kegan Paul, Trench, Trübner and Co., Limited. 1892.

THIS work clearly shows that its author has read widely and been most industrious in collecting, epitomising and arranging a vast amount of scientific information of a physical, biological and archæological character, which he has set forth in a popular readable way. His object has been to show how the results of energy in the past are closely connected with our present condition and position in the universe and what these results may be in the future. There is a good deal of speculative philosophy in the book, which is necessarily of a somewhat nebulous kind, but it will, at any rate, cause the reader with a metaphysical turn of mind to pause and think, whether he agrees with all of it or not.

Our Secret Friends and Foes. Expanded from Lectures delivered before popular audiences in London, Edinburgh and elsewhere. By PERCY FARADAY FRANKLAND, Ph.D., B.Sc. Lond., F.R.S., Associate of the Royal School of Mines &c. London: Society for Promoting Christian Knowledge. 1893.

WE think Dr. Percy Frankland has done well to publish these lectures in book form, for they make an interesting series and afford a large amount of information on the subject of bacteriology and the results which have been obtained by the careful study of those low forms of life—commonly known as germs or micro-organisms—which has been so keenly pursued of late years. The subjects treated of—besides a general sketch of the study by way of introduction—are micro-organisms in air and water, useful and maligant micro-organisms, and the theory and practice of prevention of disease. The book forms one of the "Romance of Science Series." It is well illustrated and the information is set forth in a precise and eminently readable way.

Transactions of the Royal Academy of Medicine in Ireland. Vol. X. Edited by WILLIAM THOMSON, M.A., F.R.C.S.I., Surgeon to the Richmond Hospital, Dublin. Dublin: Fannin and Co. 1892.

WE can only briefly indicate the contents of this handsome volume, which is creditable to our Irish brethren and especially to the secretary, Mr. William Thomson. The contributions are grouped in six sections—viz., Medicine, Surgery, Obstetrics, Pathology, State Medicine and Anatomy and Physiology. Amongst the more important papers are the following: Recent Advances in the Etiology of Skin Diseases and their bearing upon treatment, by Dr. Walter G. Smith; Some Recent Aids to the Diagnosis and Treatment of Diseases of the Stomach, by Dr. H. C. Tweedy; the Dietetic Treatment of Enteric Fever, by Dr. Wallace Beatty; Some Cases of Enterotomy and Colotomy, by Mr. William Thomson; Ballooning of the Rectum, by Mr. E. Hamilton; Trephining for (*a*) Cerebral Cyst and (*b*) Uncomplicated Word-blindness, by Mr. W. I. Wheeler; On the Uses of Electrolysis in Affections of the Male Urethra, by Dr. C. Y. Pearson; Further Observations on the Causes and Treatment of Dysmenorrhœa, by Dr. More Madden; On Dilatation of the Uterus, by Dr. Lombe Atthill; Endothelioma of the Lesser Omentum, by Mr. Conolly Norman; Painless Cancer of the Liver, by Dr. James Little; the Control of Inebriates, by Dr. E. McD. Cosgrave; Extreme Anomaly of the Heart and Great Vessels, by Dr. A. Birmingham.

From the report we learn that the Academy of Medicine had during the session 1890-91 243 Fellows, twenty-seven Members and twelve students. The Council records with deep regret the deaths of two Fellows—viz., Dr. Anthony Corley and Dr. Lennox Bigger.

MR. R. H. PARRY, surgeon to the Victoria Infirmary and lecturer on surgery in the Western Medical School, Glasgow, has been presented by his pupils, on the occasion of his marriage, with a handsome revolving book-case and a study chair. Mr. Marian Smith in making the presentation suitably referred to Mr. Parry's professional attainments and to his success as a teacher.

New Inventions.

THE "ACME" LENS CLINICAL THERMOMETER.

WE are indebted to Mr. Denton of Hatton Garden for a thermometer constructed on the lens principle, but in which the difficulty so often experienced in making a correct reading is obviated by an ingenious method of construction. Many must have been inconvenienced by having to turn the lens-front thermometer in all directions in order to find the column of mercury or index and to read easily the divisions and figures. The present instrument is so constructed that

the glass is "flattened on each side of the *lens* portion, thus enabling the divisions on the one side and the figures on the other to be much more readily seen, in consequence of being flat and parallel with the bore, instead of sloping off at angles as in the old form of lens-front clinical thermometer." We can testify to the ease with which these instruments can be read, whilst their shape and strength are further points of improvement which will be apparent to all.

NEW BINAURAL STETHOSCOPE.

This stethoscope, which we have received from Messrs. Evans and Wormull, 31, Stamford-street, is a very neat, well-finished, ivory-pointed instrument, and from the various trials we have made of it we can say that its acoustic properties are satisfactory. The stethoscope has an outside accessible spring, which is an improvement on the usual concealed one, as it is less expensive and less liable to get out of order. A new spring can be fitted without sending the instrument to the makers. It has also the advantage over the light flexible spring that it keeps its position better and is less liable to snap than a tempered spring. When this binaural stethoscope is fitted with indiarubber tubes, these can be removed at any time without trouble. The stethoscope has ivory ear-pieces, which give the instrument a better grip of the ear, and the ivory piece for application to the chest is removable, allowing the metallic and smaller end to be applied if found desirable.

BURIAL, CREMATION AND THE DETECTION OF CRIME.

AMID all the heat of argument which has during the past twenty years encompassed the question of the disposal of the dead certain debated points remain as the essential and indestructible foci of discussion. Especially memorable amongst these are the possibility that infectious diseases may be transmitted by means of the dead body, the value of exhumation in questions of jurisprudence, and the relative influence exercised in either connexion by burial and cremation respectively. At this date it would seem almost justifiable to conclude that the last word, or at least the last important word, on each of these disputed issues had been uttered some time ago. A glance at recent literature will unfortunately suffice to prove the unreality of any such assurance.

On the one hand we find Sir Henry Thompson endeavouring to incinerate in the white heat of dogmatic but logical assertion every plea which would claim for more gradual natural agencies employment in the duties of the crematorium; on the other, Mr. Seymour Haden commits to oblivious earth every such assertion as wholly artificial, unscientific and as an argument practically extinct. It must be admitted also that his own exploits as a champion of burial have not been insignificant. Never in the history of this controversy do we remember to have seen the whole subject as regarded from this point of view treated with so much force and clearness as in his paper on Cremation as an Incentive to Crime, read last November before the Society of Arts. His observations on the influence, or, as he would prefer to say, the impotence, of morbid bacteria in the buried body and on the purifying effect of "nitrification" as carried on by a ferment in the soil are especially noteworthy. They must, if justified by fuller investigation, go far to confirm the principle of rational burial with which his name is identified. Passing on to consider the comparative merits of burial and cremation as bearing upon the detection of crime, he cites an ample category of instances in which the evidence of death by poison but for exhumation would have been, at all events under existing conditions, impossible. There is, indeed, a striking disparity between the volume of experience adduced by him, and augmented by that of M. Brouardel and others, and the exceeding paucity of results allowed to exhumation by the advocates of cremation. No less forcible, if less copious in exposition and in the proofs adduced, is the reply to this paper by Sir Henry Thompson. As might be expected, the most prominent feature in this treatise is its demand for a far stricter method of certification than that now practised in this country. Without such an arrangement, indeed, cremation could hardly be other than what Mr. Seymour Haden, with uncompromising severity, would have it considered—a misdemeanour. Our readers are familiar with the system of double certification adopted by the Cremation Society, and with the fact that a further safeguard is provided in any doubtful case by the right of post-mortem examination and the option of refusing to allow cremation altogether. For most, for almost all, cases these precautions would be amply sufficient. At the same time there is no denying the fact that the most perfect system is liable to occasional misuse and that nothing short of an invariable practice of autopsy can provide a guarantee for the detection of criminal death so reliable as that afforded by the possibility of exhumation. The appointment of some competent committee of investigation which would thoroughly test the strength of opinions and evidence arranged on each side in this debate would be of much public service. In the meantime we incline to the view of Mr. Seymour Haden that our present mode of burial should wait no longer for reform, but that a custom of compulsory early interment in perishable coffins should be provided for by special legislation.

SUFFOLK GENERAL HOSPITAL.—The report of the general board of governors, read at the annual meeting held on the 21st ult., was taken up a good deal with regrettable contingencies which had occurred in the course of the past year. In the first place several cases of infectious disease had been received into the hospital, and the treatment of these cases had necessarily involved unlooked-for expense. Then the occurrence of severe sore-throat amongst the inmates had raised suspicions of diphtheria, and the drains had to be overhauled. Again, the occurrence of a small fire in a part of the building had drawn attention to the deficiency of the water-supply. To remedy these defects an outlay had to be incurred which was not anticipated in the forecast of the estimated expenditure. As a set-forth to these unfavourable items it is satisfactory to have to record that the hospital may now be regarded as in a complete state of efficiency. At the conclusion of the meeting a graceful acknowledgment was made of the value of the services of the medical officers, and especially of those of the senior surgeon of the hospital, Mr. Kilner, who, on retiring from that post, was elected consulting surgeon to the institution.

THE LANCET.

LONDON: SATURDAY, MARCH 4, 1893.

THE recent discussion at the Medical Society on Albuminuria, arising out of a paper on the subject contributed by Dr. RALFE, serves to emphasise the fact that, in respect to this symptom and its significance, clinical observation seems to be in a somewhat unsettled state. There is admittedly a considerable proportion of individuals who exhibit no other departure from health than the passage of small and varying quantities of albumen in the urine, and the problem is to determine whether we are justified in regarding any of such cases as physiological rather than pathological, or whether on the other hand they imply a tendency to functional derangement of the mechanism of renal secretion which foreshadows the development of declared structural disease. The solution of this problem is not a simple matter. That albuminuria of a transient and intermittent kind may occur, apparently unconnected with any definite antecedent derangement of the digestive, circulatory or nervous system, must be admitted. Such cases, most numerous in the period of adolescence, may perhaps be considered as physiological idiosyncrasies; and so far as is known the great majority of them do not develop any renal disease. But it is otherwise with cases which in their objective features are not to be distinguished from these—cases where excesses in matters of diet, or conditions of strain on nervous energy, point to the existence of nutritional or circulatory disturbance, which, so long as it lasts, is undoubtedly morbid. Several examples of so-called "cyclical" albuminuria may be referred to undue susceptibility to cold, to errors in diet, and to unusual mental strain. Are such cases to be dismissed lightly as of no prognostic significance? Do they not rather indicate—even though years may pass before any positive signs of disease arise—that their subjects present in their renal and vascular systems *loci minoris resistentiæ*, rendering them more vulnerable than the rest of mankind to a "functional" albuminuria which in course of time may pass into structural derangement? There are, however, analogous difficulties to the foregoing amongst the subjects of declared renal disease. It would be instructive to ascertain the antecedents of a large number of cases of chronic renal disease, for it would inevitably show that in no small proportion there is a notable absence of any one of the etiological factors which are generally recognised. In very many cases too, especially of granular kidney, the patient does not come under observation until the lesion is far advanced, when prognosis is often gravest, and yet he may never have had a symptom pointing directly to the kidney. Dr. RALFE did good service in pointing out that the careful management of these cases has done much to change the serious aspect of their prognosis, and the whole tone of the discussion was more hopeful as regards such patients than used to be the case. The examples cited by more than one speaker of the duration of life in persons suffering from pronounced albuminuria were encouraging. Prognosis, however, is not to be based on the albuminuria alone, or even on its amounts, but on the collateral evidence of the working efficiency of the kidney—e.g., in the daily discharge of urea—together with the state of the cardio-vascular mechanism.

The chief use to which an appreciation of the significance of albuminuria is applied is in influencing the judgment of the insurance medical officer. To reject every applicant having this symptom, without regard to the time of its occurrence or to the age and antecedents of the individual, is a harsh and hardly justifiable measure. But there is something to be said in favour of placing such people in categories below that of "first-class lives," although many may never suffer in health or have their lives appreciably shortened by the existence of this tendency to abnormal renal function. It is, of course, quite different as regards those who, having attained adult age, exhibit not only the symptoms of albuminuria, but other evidence of renal degeneration. For—despite all the care and management to which they may be subjected—they are the subjects of organic disease, the tendency of which is to progress. These lives are "bad," and cannot be accepted for insurance.

In conclusion, we may express our opinion that the time has arrived for a thorough reinvestigation of the question and for the accumulation of facts bearing upon it. We would suggest for the consideration of the Society the advisability of appointing a committee to report on the subject in all its bearings. The labour would not be light, for to be of value cases of so-called "functional albuminuria" should be followed up for years; and the records of insurance offices may well be utilised for such a purpose; whilst the registers of our hospitals and the case-books of practitioners may furnish many facts of importance in the etiology and duration of declared renal disorder.

THE difficulties which have been experienced in securing hospitals for the isolation of infectious diseases for small urban and for rural areas induced Lord THRING to introduce a Bill last session to assist in this work by the aid of County Councils, and much the same Bill is introduced this session, it being entitled "An Act for enabling County Councils to promote the Establishment of Hospitals for the Reception of Patients suffering from Infectious Diseases." It was latterly estimated that some 400 out of the 1600 sanitary authorities in England and Wales now possess such hospitals, and it may be that if we include the generally unsatisfactory temporary structures which are run up in the face of small-pox epidemics the number has within the past twelve months undergone some distinct increase. But, after all, a large majority of our authorities still stand in need of some means of isolation, and it is evidently the aim of Lord THRING'S Bill to secure such provision in the main by a combination of neighbouring sanitary authorities. Such combination has long been possible by the formation of joint hospital boards under provisional orders, but, the provision of hospitals being permissive under the Public Health Act, 1875, the Local Government Board have never formed such joint boards except at the request of the authorities concerned. Lord THRING'S Bill makes this per-

missive action practically compulsory whenever either twenty-five inhabitants or the local authorities (and even one authority is sufficient) apply to the County Council in the matter. The County Council will then hold an inquiry, and, apart from power of appeal to the Local Government Board by any authority which regards itself as aggrieved, the County Council takes to itself powers concerning selection of site, union of districts, management, administration &c. In one clause the County Council may direct inquiry by their medical officer of health, but it is added that where there is no such officer they may appoint any duly qualified medical practitioner to perform this somewhat important function. This, we think, is wrong. If a County Council have so little regard for their public health duties that they have not even appointed a skilled adviser, they certainly are not a fit and proper body to be allowed to override one or more local authorities and to force these bodies to perform duties whilst they themselves are neglecting a very obvious one. Then, again, the hospital district and the buildings being provided, the County Council may constitute a managing committee and this latter body may consist wholly of members of their Council. This is altogether opposed to precedent. Hitherto when a hospital district has been constituted the districts concerned have had its management, which involves the expenses of administration, entirely in their own hands; and we imagine that many authorities, even if they have hitherto neglected to make hospital provision, will be able with some considerable justification to demand that, if they are to pay, they ought also to have the power of controlling the expenditure to be incurred. It is true that the County Council may, where they see fit, contribute out of the county rates either a capital or an annual sum for hospital purposes, but this rather problematical generosity will not, we fancy, remove an objection to the constitution of the hospital committee which is not only possible but is even suggested by the Bill.

As regards the question of patients' expenses, we notice that accommodation within the hospital, apart from such as is of "an exceptional character," is evidently to be granted to all patients residing within the hospital area free of cost to themselves and without involving them in any civil or other disability, except in the case of paupers sent in by the guardians. To this latter exception no particular objection can well apply, since the guardians have a statutory duty to provide all sick paupers with suitable medical treatment and necessaries, and since the union rates can be made to bear the burden; so, also, when people want special accommodation and special privacy, they should pay for it. The public health purposes of isolation are fully gained when the sick person is placed in the ordinary wards and receives ordinary treatment and diet. Anything beyond this is solely for the advantage of the individual patient, and hence such "special patients' expenses" are properly made a debt recoverable in a summary manner from the patient or from his estate.

The Bill, on the whole, is an excellent attempt to secure by combination of authorities that which would be too costly, and unnecessarily costly, if provided on any adequate scale by each separate authority; and it further provides a means by which a certain amount of compulsion can be brought to bear on authorities in respect of an important sanitary provision which has heretofore been purely of a permissive character. How far such compulsion will succeed in securing the maintenance, in actual readiness, of properly administered hospitals in districts where the local authorities are as yet unwilling to incur the cost of voluntarily providing such institutions will in part depend on whether the County Councils succeed in securing the willing coöperation of those authorities in the management of the hospitals. To take all the power away from them by constituting themselves the hospital committees may tend to the opposite result, and it is quite possible that some change may be made in the Bill in this respect before it becomes law. In other respects, action in the direction indicated by the Bill is likely to be useful in the extreme; and, above all, it may tend in the direction of getting permanent and suitable hospitals erected in readiness for those emergencies which so often lead to the sudden provision of temporary and altogether unsuitable buildings such as have so frequently tended to deter people from using the only means of isolation available for them.

THE trial of the action Smith *v.* the South-Eastern Railway Company, which took place in the Queen's Bench Division of the High Court of Justice before the Lord Chief Justice and a special jury on Feb. 24th and 25th, terminated in a verdict for the plaintiff. The damages were assessed at £850, being £650 in addition to the £200 paid into Court by the company as sufficient compensation. The accident occurred as far back as Dec. 12th, 1890. For some months the plaintiff was attended by his own medical attendant, but as he did not recover he went into the National Hospital for the Paralysed and Epileptic, Queen-square, where he was seen by Dr. FERRIER. He remained at that institution for a month, after which he went to Eastbourne. Returning much in the same condition, he was readmitted to the hospital and kept there for about three months. With the exception of a general trembling and special disability of the right arm, the symptoms appear to have been purely subjective; indeed the view taken of the case by the medical officers of the hospital, and by Mr. PAGE, who was consulted on behalf of the plaintiff, was to the effect that the nervous affection was not due to organic lesion of the cerebro-spinal nervous system, but was rather functional in its nature—partly ascribable to disturbance of the spinal motor system and partly to defective will power, a condition collectively known as neurasthenia. It was not contended by the company that the case was one of pure and simple counterfeit, but they alleged that there was exaggeration of the symptoms, and on this point the evidence of the company's medical advisers seems to have leaned more on the side of wilful misrepresentation than on that of defective power of the will. It is not surprising that different opinions should be formed in a case of such a complex state as neurasthenia. The affection is not susceptible of accurate estimation, inasmuch as the quantities of the facts are variable and varying, and the facts themselves, to a great degree, dependent, as they are, on the patient's sensations and expression, are problematical in nature and extent. In such a case what to the laity may appear as "cross swearing" in the witness-box is in reality truthful testimony—on either side—of belief formed and formulated

out of facts as to which it is impossible mutually to concede the real value. "Railway spine"—in our opinion an unwarrantable term, since the consequences of a railway collision differ in no way from the results of physical violence sustained by other means—covers two distinct but nevertheless real affections. In one of these there is to all appearance a disturbance of function, temporary or abiding, and probably nothing more. In the other there is actual lesion arising immediately from the accident or developing slowly out of disordered innervation and perverted vascular supply. As a rule the neurasthenic cases get well, and obviously they will do so the sooner if the patient is freed from the anxiety inseparably connected with impending litigation.

Besides the truthful representation of symptoms, whether due to organic or functional causes, there is undoubtedly too often wilful misrepresentation by unprincipled persons who seek to make capital out of railway accidents by which they were never injured. Some years since, a railway company was sued for damages for alleged injuries from a collision in which the plaintiff was proved not to have been. A criminal prosecution resulted in a sentence of two years' hard labour for the miscreant, but inasmuch as he was "a man of straw" the company was cast in heavy charges sustained in defending the civil action and prosecuting the criminal cause. The directors of railway companies, as the servants of the shareholders, in face of the liability to false or exaggerated claims, are bound to investigate fully all calls upon their employers' funds; but they owe a duty to the public through persons whom they have actually injured, and, to their credit be it said, they are, as a rule, not only willing but anxious to compensate liberally rather than run the gauntlet of litigation.

Unfortunately, the means adopted to arrive at a settlement are not always the most desirable. In our opinion the offer should be made either by the financial or legal representative of the Company and not by their medical adviser, as appears to have happened in the case under consideration. There would then be no occasion for such animadversions as fell from the lips of the Lord Chief Justice last week. We see no serious objection to the medical men on both sides being asked to assess the compensation for the injuries alone, but the reference should be mutually agreed upon and explicitly stated both for their own honour and that of the profession to which they belong. They should zealously guard their actions so as to give no cause of a charge of "huckstering," such as was recently made by the head of the common law of England.

THE Lord Mayor of the City of London recently presided over a meeting at the Mansion House which was held to consider the education of the sanitary inspector. It had been convened at the instigation of the British Institute of Public Health, and the subject not only of the education but of the certification of the sanitary inspector has thus attained some prominence. Subsequently letters have appeared in the daily press which have led to the conclusion that there is some rivalry between existing institutions dependent upon a desire to take the sanitary inspector under their wing; and, indeed, it has been alleged that the meeting at the Mansion House did not include the members of the council of the Sanitary Institute for the reason that these gentlemen were not invited. If this be so, and there does not seem to be much doubt as to the fact, the body which originated and has hitherto conducted the examination of sanitary inspectors has been excluded from the discussion of the subject in which they had every right to share, especially as the Sanitary Institute is the only body whose certificate is recognised by the Local Government Board as a qualification under the Public Health (London) Act. We do not for a moment suppose that the Lord Mayor was in any way cognisant of or responsible for this omission on the part of those who had charge of the management of the meeting, and we think it the more to be regretted because there is no reason for believing that the Sanitary Institute desires to retain a monopoly of the examination or to prevent the constitution of some other body to undertake this important work. We say important, because we believe that the future sanitary administration of this country may very largely depend upon the lines which are now laid down for the education of the sanitary inspector; and just as we believe that if these be sound the public will derive advantage from the existence of a staff having an intimate and practical knowledge of structural conditions, so also we think that if any attempt be made to place on the shoulders of this official work which now properly forms part of the duties of the medical officer ofhealth the public will be sufferers. It would be calamitous if any desire to give the sanitary inspector a quasi-medical knowledge should lead sanitary authorities desiring a cheap service to assume that a complete medical education was not needed for the purposes of their administration. It is to be hoped that the several bodies who now claim to examine the sanitary inspector will not receive the sanction of the Local Government Board for this purpose until the constitution of a proper examining board has been fully considered. It would certainly not be to the public interest that two or more bodies should act separately in this capacity; for it might be found in the future that a spirit of rivalry would militate against the success of the object which should be held in view. We do not doubt that the attention of the Local Government Board has been already directed to this danger, and we may be equally assured that no hurried step will be taken which would be likely to lead to so unfortunate a result. The Local Government Board is especially well fitted to consider the part which the sanitary inspector must play in local administrations in the future, and we trust that this Board will institute a departmental inquiry into the circumstances that have been brought to light by the meeting which has been held at the Mansion House and by the letters which have since appeared in the daily press, and will decide as to the proper body to certify as to the fitness of sanitary inspectors to enter the public service.

MR. THOS. AUBERY BOWEN, L.R.C.P., L.M.Irel., M.R.C.S., of Melbourne, Victoria, Australia, has been appointed by the Government to represent the colony at the Eleventh International Medical Congress, to be held at Rome in September next.

Annotations.

"Ne quid nimis."

THE PHYSICIAN IN HIGH PLACES.

WHEN, in February, 1878, Pope Pius IX. was succeeded by Leo XIII., amidst the complete change in the *personnel* of the Vatican there was one eminent functionary retained, and that was Dr. Alessandro Ceccarelli, body physician to the late Pontiff. Many were the reasons given by the outside world for this departure from usual custom in the constitution of the Papal Court. One was that Dr. Ceccarelli "knew too much" to be safely relegated to a life of "greater freedom and less responsibility." From the close intimacy in which he stood to Pio Nono and also to the leading cardinals and plenipotentiaries accredited to the Holy See, he was necessarily the recipient of many secrets, of many political schemes, some abortive, some in process of development; of many intrigues such as permeate the complex life of the Curia and of which not a whisper is allowed to reach profane circles. Little did the authors or propagators of this surmise know Dr. Ceccarelli, who needed no subscription to the "Oath of Hippocrates" to observe the "fidele silentium" imposed on all physicians—doubly on one enjoying opportunities such as his of looking behind the politico-religious veil of the Vatican. The gossip of society was wide of the mark in its accounting for Leo XIII.'s retention of his predecessor's body physician, and, as usual, in its anxiety to appear "knowing" missed the plain facts obvious to all. In the first place, Dr. Ceccarelli was a surgeon as well as physician *hors ligne*. The French Ambassador, to take one instance out of many, suffered from a sublingual cancerous growth, and this was extirpated so skilfully by Dr. Ceccarelli that on dining with his Excellency shortly afterwards he found under his serviette the brevet and the insignia of the Legion of Honour. Even outside the Apostolic *entourage* his professional skill was in request, and his refusal of General La Marmora's offer of the post of "Generale Medico" in the Italian army was as great a disappointment to the Quirinal as it was a gratification to the Vatican. With so much to recommend him as an able and devoted consultant, he had other qualities of the "physician in high places" only second in importance for that *rôle*. He had admirable self-possession and social tact—he was indeed scarcely less of a diplomatist than the ambassadors and ministers accredited to foreign courts. That a man cognisant of facts so momentous should yet have the "divine gift of silence" in such perfection was a special qualification for the post of pontifical consultant not likely to escape the notice of Leo XIII. Not that his reticence was an absolute or an indiscriminating one. Much that has since become history he was able to confirm or to supplement; much that is yet valuable for the historical or political student to know he has embodied in "documenti preziosissimi per la storia d'Italia," especially for the dramatic events that preceded and followed Sept. 20th, 1870—documents that he would never have committed to paper had he not meant them to see the light. These, when the time comes for publishing them, will furnish lively and instructive reading, and they will also attest their author's capacity of distinguishing between the facts which are common property and those which are "sacro digna silentio." Amongst the latter may safely be included the memorable encounter between the Empress Eugénie and Pius IX., when both exalted personages, whose fates were so closely and so disastrously linked, succumbed to the shock of long pent-up emotion, the Empress admitting that it was "my war," as she termed the fatal campaign of 1870, that made her octogenarian host a "prisoner in the Vatican," and the invalid Holy Father vainly striving at much personal risk to comfort the prostrate suppliant. There are situations in life, whether high or humble, from which the outer world must for ever remain aloof, and of these the above indicated was one amongst many on which Dr. Ceccarelli's lips were religiously sealed. This innate sense of professional honour was but in keeping with the large benevolence he lavished on the sick and helpless poor—benevolence, as described in our obituary notice of him in THE LANCET of last week, which knew no distinction of party or creed, but expended itself on Garibaldian insurgent no less than on Papal Zouave or assumed the congenial form of hospital construction and the multiplication of clinical wards. Even, we are told, in the delirium of his last illness his thoughts kept running on the Congregazione di Carità and his uncompleted projects for the extension of its usefulness. Lives like his are exemplary for their proof that association with the exalted of the earth implies no necessary estrangement from the interests of the lowly and the less favoured, and that active, unobtrusive benevolence has its share as well as diplomatic reserve and scientific achievement in determining the character and career of "the physician in high places."

THE PREMIER ON MEDICAL FEES.

THERE seems to be no end to Mr. Gladstone's feats. He has favoured the public with another great speech—that on bimetallism, in the course of which he remarked that many things had risen in value in late years. Oddly enough, among the few things he instanced was the remuneration of medical men. "No one is unaware of the increase of fees in the medical profession, and I am bound to say that there are none more nobly earned in the world." We are grateful to Mr. Gladstone for another note of praise to the work and worth of medical service, but we are bound to say that we think the second half of his allusion to the medical profession less open to question than the first. The fees of the medical profession, always low in respect of a large amount of medical work, are becoming lower, and any increase in regard to a more limited section of such work does not bear comparison with the increase of wealth in the community and the increase of remuneration for other kinds of service.

THE LATE DR. JAMES ANDERSON.

THE friends of Dr. James Anderson—and they are a "numerous host"—were greatly shocked on Tuesday by the intimation of his death, which, though not sudden, was preceded by a very brief illness. He seemed in his usual health on Sunday, and posted his letters after midnight. After this he had diarrhœa and sickness, and was found on the Monday morning in his study, on the couch, in a state of collapse. Dr. Burnet and Dr. James Taylor were sent for, and they used every remedy and resource, in spite of which he never rallied and died at 8 o'clock on Tuesday morning. The chief symptoms were pulselessness, vomiting and melæna. The lungs became engorged and the heart failed. He was convinced throughout that he was dying. He asked for oxygen, which revived him at times. A post-mortem examination revealed no evidences of organic disease, but congestion of the lungs, at parts pneumonic, and a general hæmorrhagic state of the intestinal membrane. He had himself whispered his own diagnosis of the disease as "Influenza, acute bronchitis." We deeply regret to have to record the death of a physician so young and so full of promise. This is not the moment to give a fitting account of his character and his work, which we shall hope to do next week. We need only say now that few deaths have occurred in the profession more premature and more distressing, or that will be more deeply mourned. In accordance with his own wish, Dr. Anderson's body was removed on Thursday to Aberdeen, to be interred in his mother's grave, whose recent illness and death were a great grief to him. At

the annual meeting of the Medical and Chirurgical Society, held on Wednesday last, Sir Andrew Clark, the President, in his presidential address, made the following touching allusion to his late colleague: "Yesterday morning Dr. James Anderson died. Only three days ago he appeared to be in the fulness of health and vigour, and his death, totally unexpected and tragically sudden, has thrown a cloud of grief over many here present. He was born in the year 1853 in the parish of Logie-Buch, Aberdeenshire. He received his education at the Gordon Hospital School in Aberdeen, and his student days were spent at the University of that city. Dr. Anderson was a man of exceptional ability and promise. As a teacher he was popular and successful from his undergraduate days in Aberdeen, when circumstances made teaching a necessity, till later years, when it became one of his chief delights. As a physician his thoroughness, his calm judgment, his special skill in nervous diseases and his wide knowledge of general medicine were earning for him a well-deserved reputation. He had passed through the seed-time and the summer and had reached the harvest which he was never to reap. Dr. Anderson was widely cultured and possessed a highly artistic feeling. He was pure-minded, upright and self-sacrificing and independent; a trustworthy and a steadfast friend, he was beloved by all who had the privilge to know him. Recently Dr. Anderson had suffered a severe bereavement in the death of his mother. She had early been left a widow, and between her and her son there was a bond of sympathy and love altogether exceptional in its closeness and in its strength. She was ever first in his thoughts, and her approbation was the stimulus that urged him on to that work which begot his success. Since her death he had never been quite the same man. Still he seemed in good health up till last Sunday evening, when he was suddenly attacked by severe diarrhœa with hæmorrhage and syncope. Next morning he was found by his servants in a state of collapse. Some of his medical friends were hastily sent for, and during the day that followed everything that their care and love could suggest was done for him; but all was done in vain, and his life, full of work, of uprightness, of loving-kindness and of promise, was thus brought to an untimely end."

A BILL "TO STOP TIPPLING."

A STATESMAN can propose no greater object to himself than the reduction of the number of houses licensed for the sale of intoxicating drinks. All observers are agreed that drunkenness is the greatest curse of this kingdom. The existing number of houses is out of all proportion to the legitimate wants of the people, and is in itself a huge temptation. The difficulty is to reduce the number without doing injustice to the publicans. Some means to this end must be found. It is not our duty to adjust the claims of the public and the publican. But the time is "ripe and more than ripe" for bringing the public-house system into some accord with reason and with national sobriety. We do not think that the result of "Local Option" in any considerable district will be the closing of all the public-houses. The public-house is far too popular an institution in British communities for that to happen. We should scarcely wish for the entire prohibition of the traffic, even if that were possible. Such extreme remedies are apt to generate more extreme diseases. The Bill of the Chancellor of the Exchequer is open to the criticism that it looks more like a Bill to please the teetotallers than to pass the Legislature; but in its main object—"to stop tippling," as the Chancellor of the Exchequer defines it—we heartily concur. "Tippling" is only another expression for casual drinking, and casual drinking is the great source of misery and disease. If people would be content with a glass of beer or wine with their meals little harm would be done. The constant introduction of alcohol into an empty stomach is what does the mischief. But this is the very support of our public-house system. If "tippling" is done away with the houses cannot be maintained. A longer notice than three years will have to be given unless a money compensation is granted. A much stricter police supervision should be exercised. The hours should be much shortened. It is drinking in the early morning and late at night that is demoralising and injurious. The serving of children and habitual drunkards needs to be made penal.

THE DIFFUSION OF SMALL-POX.

AMONGST the localities from which we receive news as to the spread or maintained prevalence of small-pox are the following:—Bingley, Birkenhead, Birmingham, Bristol, Bolton, Blackburn, Bradford, Chadderton, Carlisle, Denbigh, Dewsbury, Driffield, Guildford, Halifax, Hemsworth, Heywood, Keighley, Leek, Leeds (where 67 cases were in hospital at the end of last week), Leyton, Liverpool, Leicester (with only one fresh attack last week), Manchester (31 fresh attacks), Middlesbrough, Neath, Newcastle, Normanton, Northampton, Nottingham, Oldham (with 16 fresh cases), Pontefract, Rotherham, Runcorn rural district, South Elmsall, South Kirby, Southampton, Sheffield, Sunderland, Swansea, Swindon New Town, Tong, Wakefield (where a prisoner in gaol was attacked), Warrington (with 7 fresh attacks), Widnes, Wilsden, West Ham and York. Some cases have also arisen at Whitegate and Siddal, which are near the site of the Halifax Small-pox Hospital, and the occurrence is locally attributed to proximity to that institution, which continues to receive a number of patients. Indeed, 16 fresh attacks were recorded in Halifax last week. In the metropolis the disease is increasing in amount, and on Feb. 28th there were no less than 165 cases under treatment and isolation in the small-pox hospital ships belonging to the Metropolitan Asylums Board. This indicates, so far as London is concerned, an ominous rise.

THE INTERNATIONAL MEDICAL CONGRESS.

AN Italian correspondent writes, under date Rome, Feb. 25th:—"To the list already given of the presidents of the various sections into which the programme of the Congress has been divided those for Sections 7 and 16 have yet to be added, the members composing these sections not having been present in sufficient number when the vote was taken. The Secretary of the Organising Committee (Professor E. Maragliano) has accordingly requested the members of Sections 7 and 16 to proceed to the election of their presidents by sending in to him on March 1st the names of the candidates they wish to vote for, their votes being contained in a sealed envelope. In electing their president the members of Section 4 (that of Pharmacology) expressed a wish to the organising committee that the title of the section should be changed from 'Farmacologia' into 'Farmacologia Sperimentale e Terapeutica'—a wish which was immediately complied with. That section, presided over by Professor Mariano Semmola of Naples, promises to be one of the most interesting as regards the practical as well as the scientific character of its contributions. Section 16 (Dermopathy and Syphilopathy, under its able president, Professor T. De Amicis), has secured, by personal canvass and also by letter, the votes of the majority of its members for the following selection of topics to be discussed at the Congress:—(1) The gonococcus and the blennorrhagic process; (2) the interpretation and pathological place to be assigned to the so-called primitive idiopathic sarcoma of the skin, with a view to the more distinctive nomenclature of the same; (3) the nature of the venereal ulcer; (4) the actual state of knowledge of the various forms of lichen; (5) eczema and its nature; (6) at what stage the practitioner should initiate the general cure of

syphilis. Again, in Section 18 (that of Legal Medicine, presided over by Professor De Crecchio), the following subject has been proposed for discussion: 'How to give practical effect to the study and teaching of legal medicine with a view to its more efficacious intervention in the administration of justice.' There is no subject which will attract more interest or more controversy than this, reopening as it does the *quæstio vexata* so keenly debated at the last meeting of the British Association on Criminal Responsibility and its Relations to Physical Organisation. The Italians have long been at work in creating a school the teaching of which aims seriously at modifying the traditional views of crime and its penalties embodied in legal practice. Names like Lombroso, Colajanni, Mantegazza and Vergu are but a few out of many associated with this movement, and there is no doubt that their propaganda is spreading beyond Italy into other States—Switzerland, Austria-Hungary, Germany and France. The *relatore* (reporter) selected to introduce the subject at the Congress is Professor Filomusi Guelfi—a mental pathologist of acknowledged accomplishment and power."

MONUMENTUM ÆRE PERENNIUS.

HERO-WORSHIP plays a large part in ennobling the aims of succeeding generations, and the Chemical Society are setting an example which might well be followed by kindred institutions in arranging a series of memorial lectures embracing the life-work of the great chemists who have gone before. The classical and admirable memoir, compiled and read by Professor T. E. Thorpe, F.R.S., on the first anniversary of the death of Hermann Kopp, on the 20th ult., was the second in this notable series. When Kopp began his investigations at Giessen the borderland between chemistry and physics was a pathless wilderness. Hardly a single fixed point had been determined with even an approach to accuracy, and Kopp had to grope his way until, by years of patient labour, he had established landmark after landmark. Kopp's work on boiling points and vapour densities constitutes a splendid monument of a life devoted to pure science *con amore*, enabling us to take a great stride towards uniting the chemical and physical conceptions of the atom. From this point to the knowledge of the ultimate constitution of matter is but a step, and we may well say, as Horace did of the first navigator, *Nil mortalibus arduum est*.

TAKING THE OATH.

THE following is from the *St. James's Gazette* of Feb. 24th: "At an inquest held before Mr. John Troutbeck, coroner for Westminster, yesterday, Mr. Henry C. de Renzi, house surgeon of the hospital there, asked to be sworn without kissing the book. 'Why?' asked the coroner. 'Because it is an uncleanly practice,' replied the doctor. 'Ah!' said Mr. Troutbeck, 'then it is an uncleanly practice in which a great many people indulge. This is a hospital book, I believe, and you can surely find a clean page in it.' 'I think,' added Mr. de Renzi, 'that I have a legal right to be excused kissing the book.' 'I don't think so,' remarked the coroner. 'Find a clean page and kiss it.' The doctor, rather than continue the discussion, kissed the book and ended the incident." It is really remarkable after all that has been published in our own columns and in the pages of our contemporaries—medical, lay, and legal—that so much ignorance should still prevail as to the provisions of Section 5 of the Oaths Act, 1888, an Act, we may once more point out, now more than four years old. It is not a little astonishing that a member of the legal profession holding a position which is practically that of a judge should fail to make himself acquainted with the law of the land in this respect. The recent action of medical coroners in this matter has been commendable, and affords another argument in support of the advantages of the appointment of medical practitioners as coroners. We would suggest to any medical witness who wishes to avoid kissing the book that he should say as he rises to be sworn or enters the witness box: "I wish to be sworn with uplifted hand." If asked Why? he should answer "Because the Oaths Acts, 1888, Section 5, permits me to do so without further question."

THE AGE-INCIDENCE OF SMALL-POX.

THE medical officer of health for Oldham has supplied some information as to the age-incidence of small-pox in the cases received into the Oldham Hospital from that borough and from Chadderton. Perhaps the most interesting points of all are the absolute absence of any small-pox amongst successfully vaccinated children under nine years of age and the fact that out of thirty attacks amongst the comparatively few unvaccinated people no less than twenty-two were in children under nine years. In short, small-pox now, as formerly, has its greatest incidence in the unvaccinated in the early years of life. Amongst the great body of the vaccinated in Oldham and Chadderton there were fifty-one attacks of small-pox, but any special incidence on them is not shown until the ages of twenty to twenty-nine years, an age at which, as we now know, post-vaccinal small-pox comes on owing to the waning influence of a primary vaccination and its inability to protect from attack in the face of an epidemic influence.

THE BANQUET IN HONOUR OF PROFESSOR VIRCHOW.

A LARGE and influential meeting was held on Saturday last in reference to the banquet to be given in honour of Professor Virchow, and the following were appointed an executive committee for this object: Sir Andrew Clark, Sir James Paget, Sir Joseph Lister, Sir Richard Quain, Mr. Bryant, Sir Archibald Geikie, Sir William Mac Cormac and Mr. Hutchinson. The banquet will take place on Thursday, March 16th, in the Whitehall Room at the Hôtel Métropole, at 7 for 7.30 P.M. The price of the tickets will be a guinea and a half. Lord Kelvin, as President of the Royal Society, will take the chair, and will be supported by the Presidents of the Royal College of Physicians and of the Royal College of Surgeons. The dinner will be strictly a subscription one and no complimentary tickets will be issued. Application for tickets should be made to the chairman of the committee, Mr. Hutchinson, 15, Cavendish-square. The lecture itself will be delivered at the rooms of the Royal Society, Burlington House, at 4 o'clock on the afternoon of the same day. Admission will be by tickets, which can be obtained by direct application to the assistant secretary, Mr. Rix. Professor Virchow will take for his subject "The Position of Pathology among the Biological Sciences."

THE HEALTH OF LEO XIII.

FROM Rome a correspondent writes under date Feb. 27th:—"The severe and continuous exertions imposed on the Holy Father during these days of jubilee have told visibly on his powers of endurance, exceptionally good as these are in an octogenarian. This result was anticipated long before the arrival of the pilgrims, and Dr. Lapponi (the late Dr. Ceccarelli's junior as body-physician to His Holiness) spared no effort to minimise it. During all last week his visits, instead of being, as in his predecessor's time, paid every third day, were renewed every twenty-four hours, and by Feb. 22nd he had satisfied himself that the receptions would have to be suspended for one or more days, and their duration abridged, if his august patient was not to collapse altogether. In furtherance of this wise precaution Dr. Lapponi

had to adopt a somewhat peremptory tone with the Comitato pei Pellegrinaggi (Pilgrimage Committee) to postpone the reception of the Hungarian among other deputations and to restrict the French Ambassador's interview to fifteen minutes. Even after this exertion His Holiness had to retire to rest, and now, by Dr. Lapponi's directions, does not leave his sleeping apartments till noon, after which he gives audience to one deputation of pilgrims only, not to several in succession. The chronic catarrh of the respiratory and alimentary mucous tracts has by this means assumed nothing of the gravity it has shown on occasions of similar exertion, and only the somewhat marked reduction of strength explains the unusual frequency and solicitude of Dr. Lapponi's visits. Meanwhile there has been in the Vatican a general postponement of high ecclesiastical business, all affairs that cannot be relegated to another season being discharged by the Cardinal Prefects."

A HORSE ACCIDENT PREVENTION SOCIETY.

THE purpose which at present forms a chief object of concern to the Horse Accident Prevention Society—namely, the improvement of London roadways—is one which will commend itself to no section of the general public more than to medical practitioners. We have during the last quarter of a century witnessed the operation of several new, and so far experimental, ventures in road-making, some of them by no means equally safe and convenient. Much has been sacrificed to facility of transit, and a large and increasing series of accidents attributable to this fact has at length determined the formation of the association above mentioned. At a meeting of the members held last week the character of asphalte as a paving substance was treated with very scant consideration, and it was decided to petition the city authorities to substitute for its hard, greasy surface that of wood or some other and safer form of pavement. There are yet other allied matters of equal importance which we trust will also receive a due share of attention. The removal of obstructions, the regulation of street repairs and of traffic, the disposal of refuse, and, last but not least, any measure which would lessen if it cannot obviate the mischievous effect of tramway metals upon the wheels and springs of every other vehicle than a tramcar, might each and all be accepted by the Society as belonging to the proper sphere of its exertions.

ETIOLOGY OF MALARIA.

THE latest addition to our knowledge of the bacteriology of malaria has been contributed by Dr. Julius Mannaberg in a paper read before the Society of Physicians at Vienna (*Allgemeine Wiener Medicinische Zeitung*, Zw. 5, 1893). He divides the micro-organisms connected with malaria into two groups: (1) Parasites with direct sporulation, without syzygies; and (2) Parasites with direct sporulation and with syzygies. In the first group he places the micro-organisms connected with the quartan and tertian varieties of the disease; in the second, the pigmented and unpigmented organisms found in the blood of patients suffering from quotidian ague, and also those described as occurring in the malignant forms of tertian ague. Dr. Mannaberg had observed the latter variety before Marchiafava and Bignami described them, and corroborates these observers in every detail, both as regards the appearance of the parasites and the nature of the disease produced by them. Dr. Mannaberg further demonstrated, by means of special illumination, that the younger forms of all organisms are not found in the corpuscles, as Marchiafava and Celli maintained, but, as Laveran had previously shown, are to be seen adhering to the outside of the red corpuscles. As regards the semilunar bodies in the blood of malarial patients, which have been described by several observers, Dr. Mannaberg states that in forty-three cases of "summer fever" (due to infection by the organisms contained in his second group) he found them thirty-seven times. He considers that these semilunes are formed by the coalition of two to four amœboid bodies and states that he has been frequently able to demonstrate the approach of such bodies to each other and the subsequent appearance of a semilune. Dr. Mannaberg opposed Laveran's views that the semilunar bodies were the result of the cachexia produced by malarial poison, for he had never seen them in the blood of patients suffering from the forms of disease produced by organisms of his first group when the ague had lasted for a very considerable period, but had frequently found them within the first few days of the fever in the blood of patients suffering from the more severe forms (second group) of malarial poisoning, but in which cachexia was not marked. Finally, he considers the treatment of malaria by quinine and maintains that the organisms are destroyed and rendered inert by the action of this drug.

THE HOUSING OF THE WORKING CLASSES ACT.

ONE of the difficulties met with in the administration of the Housing of the Working Classes Act is that of deciding whether an unhealthy area is to be improved under the provisions of Part I. or Part II. of the Act. There is very little indication in its provisions of any well-marked distinction between the two. A scheme relating to ten houses, or less than ten houses, definitely falls under Part II., and again the question of rehousing those displaced may also determine this point, for under Part I. it is obligatory on the local authority to rehouse at least one-half of the working classes resident in the area, but under Part II. it is permissible for the Local Government Board to relax this requirement altogether. Part I. appears again to differ from Part II. in providing for the acquisition of neighbouring lands for the completion of the scheme; but under Part II. the local authority does not appear to have this power. In London, too, the question of cost may enter into consideration. Under Part II. the expenses may fall wholly on the district authority, or may be contributed to by both the district authority and the County Council, whereas under Part I. the whole cost falls on the Council. The inquiry which has during the last two weeks been held in St. Pancras will establish important precedents; in the absence of any well-defined distinction between the two parts of the Act its future working can only be determined in this manner. There is no conflict as to the need for improvement of the areas in question, both the Council and the St. Pancras Vestry being agreed on this point; and the result, which is of much importance to the future administration of the Act, will be awaited with some interest by the various authorities in London.

PERIOD OF INFECTION IN MUMPS.

THE question as to the transmission of the infectious diseases and the exact stage of the disease at which infection is most likely to occur has been satisfactorily settled regarding most of the exanthemata. In mumps, however, the case is different, some authorities maintaining that the disease may prove infectious throughout the whole of its course, whilst others are of opinion that this is only the case at the commencement of the attack. Dr. Rendu, in a paper read before the Société Médicale des Hôpitaux, related two cases which are valuable as throwing light upon this point. A young lady visited her mother on Jan. 2nd, who complained of slight malaise; on the following day, however, she developed mumps. On Jan. 24th her daughter, who had seen her on the 2nd, but not since, was likewise attacked. In the interval she had seen no person who was suffering from the disease. Dr. Rendu argues, therefore, that a case may be infectious even before the characteristic parotid swelling has made its appearance. A second case was very similar to

this one. A child ten years old was attacked after being in company with a friend who, although then showing no signs of the disease, was found a few hours afterwards to be suffering from it. Mumps is, therefore, evidently infectious at the termination of the period of incubation. Dr. Rendu is of opinion that infection is conveyed by means of the breath.

THE HOSPITAL SATURDAY FUND.

THE Hospital Saturday Fund is steadily increasing from year to year. The receipts for last year, as reported at the annual meeting, were £20,309, as against £18,909 in the previous year, or a rise of £1400. The expenditure was less by £659. The amount distributed was £17,009, against £16,284, and a balance of £1113 had been carried forward to the present year's account. These are very creditable facts and show a great amount of kind and honest labour. The credit of the fund will always be tested chiefly by the amount of the workshop collection and the efficiency of the organisation by which it is gathered.

SMITH v. THE COLONIAL SECRETARY OF WESTERN AUSTRALIA.

THE action of Mr. Henry Lionel Smith *v.* The Colonial Secretary of Western Australia for wrongful dismissal still drags its weary course. In the last stage of this case before the Supreme Court in Banco the judges have differed. As a consequence the judgment which had been delivered in favour of the plaintiff stands. But the Attorney-General has applied to the Court to stay execution against the Crown for the amount of damages and costs pending an appeal to the Privy Council in London. We sincerely trust that Mr. Smith will in the end be rewarded for most persistently fighting a just battle against very unequal odds.

THE CITY CHOLERA HOSPITAL.

THE proposal of the City authorities to provide a floating hospital for cholera on the Thames, between London Bridge and Blackfriars Bridge, has raised some opposition. Wherever the City propose to deal with cholera they will meet with opposition. The actual proposal relates to the provision of a vessel 100 feet in length and 25 feet in width, to be moored 35 feet from the shore. If it be properly managed—and this might almost be taken for granted—we doubt whether any evidence is likely to be adduced to the effect that it will be either a nuisance or a danger to public health. We know nothing as to the aerial diffusion of cholera from hospitals where such cases are aggregated, and, even assuming that the brackish Thames water at this spot is occasionally used for purposes of cleansing, it will not be difficult, under such supervision as would certainly be organised by Dr. Sedgwick Saunders, to ensure complete disinfection of discharges and of the washings from infected linen &c. before these are passed into the river. The position selected is one which, we believe, avoids all lines of river traffic.

HERNIA OF THE LUNG.

DR. EUGENIO SANCHEZ AGRAMONTE writes to the *Revista de Ciencias Médicas* of Havana that, having read an annotation in THE LANCET of Dec. 3rd, 1892, referring to the rarity of cases of pulmonary hernia, and giving an account of one which was successfully treated by excision and reduction of the stump by Dr. Massart, he feels bound to record a somewhat similar case occurring in his own practice. The patient was a young man twenty-seven years of age, who had received a wound from a penknife between the ninth and tenth ribs in the axillary line on the left side. When he was seen eleven hours afterwards the lung was found to be protruding from the wound, the extruded portion being dry, like parchment, of a violet colour and about ten centimetres in breadth. There was no hæmorrhage. The wound was only about two centimetres in length. Thinking that the return of such a mass in the condition in which it was might be dangerous, Dr. Agramonte determined to excise it. The pedicle was secured by means of stout catgut in a figure of 8. After excision the stump was cauterised with a concentrated solution of carbolic acid. It was then returned into the pleural cavity, the wound washed with a boracic lotion, the lips brought together with carbolised silk, and a dressing of boracic cotton wool applied. The operation was not followed by fever or dyspnœa, and the wound healed by the third day. A little friction sound could be heard over the cicatrix and there was a circumscribed area around it where there was dulness on percussion. As in Dr. Massart's case, there was no collapse of lung and no pneumothorax, and the interference with the pleura did not occasion any pleurisy.

SMALL-POX IN SCOTLAND.

IN Glasgow the cases for the week ending Feb. 11th numbered 9; for Feb. 18th, 15; for Feb. 25th, 11; and 4 new cases occurred between Feb. 25th and Feb. 27th. On the whole, the disease tends to diminish, as is seen by comparing the fortnight ending Feb. 18th (during which there were 24 cases) with the previous fortnight (during which there were no less than 55). The recent cases, however, include importations from Manchester, Carlisle, Girvan and New York. In Edinburgh 4 new cases have recently occurred, and a few days ago the number in Canongate Hospital was about a dozen. In Dumbartonshire there have been no new cases lately, and only 5 remain in hospital. Govan, which has recently erected new small-pox wards, had its first case about ten days ago. At Airdrie a fourth member of one family has been attacked, and all four are under treatment in hospital. At Forfar two new small-pox wards are to be provided, and at Dundee revaccination is in demand. The disease has appeared amongst the railway navvies near Kirkcaldy, and Wemyss Hospital is being used for their isolation. A third case has occurred on the Forfar and Brechin railway, and all three are being treated in the same hut. Cases are also reported from Perth, Paisley and Motherwell. The Moffat District Committee of the Dumfries County Council has empowered the local medical men to carry out gratuitous vaccination and revaccination, and other local authorities are adopting similar preventive measures.

THE MEDICAL DEFENCE UNION (LIMITED).

THE annual report for 1892 of the Union is interesting reading. There is a numerical increase in the Society of 625 new members, and there is an increasing list of cases of grievance on the part of medical men which illustrates the great advantage of every medical man, who has not special reasons for being unconnected with such a Society, being a member of it. There is no doubt that under the able advice of the experienced officers of the Society much litigation and much injustice have been prevented. Of course it is not all plain sailing with the Medical Defence Union any more than with the other bodies. Their legal expenses have been very heavy this year. We observe two very just items of expenditure—viz., 100 guineas to Dr. Leslie Phillips and 50 guineas to Dr. Bateman. Anyone who has noticed the energy thrown into this Society by these gentlemen will realise the inadequacy of such remuneration. The charges of the solicitors to the Union, Messrs. Johnson, Barclay, Johnson and Rogers, amount for the year to £429 1s. 3d., and their payments to counsel and solicitors in various causes amount to £897 14s. 7d. This includes £442 8s. 2d. as Mr. Tait's costs in the action of Denholme *v.* Tait. The payment of these costs by the Union was rather warmly discussed at the annual meeting held on Feb. 22nd

at 20, Hanover-square. The subject is still *sub judice* and is referred for consideration to a later meeting. Without expressing any opinion on the merits of the case, we cannot wonder at a difference of opinion on the subject in the Union, if on no other ground than the abortive nature of the trial. We do not remember a case where the inefficiency of litigation has been more conspicuously demonstrated, or where the action of counsel on both sides was so extraordinary. Defence societies do not mind paying costs where a definite result is obtained and can be shown; but where everything remains profoundly unsettled as here the result is disappointing in the extreme.

THE MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

THE Committee of the General Medical Council held a meeting on Tuesday at the offices of the Council. Several gentlemen were examined and gave interesting information on the working of the system of Medical Aid Associations viewed from a medical point of view. We understand that at a future meeting to be held on March 17th the secretaries or members of the committee of such institutions will be invited to give information to the committee and to place their views before it.

CORN CURES AND THE INLAND REVENUE.

AMONG the cases recently disposed of at the Mansion House was one which, for purposes of jurisprudence, can only be accurately described as an instance of unlicensed medical practice. It was that of a chemist who, after selling an application for the treatment of corns without the official stamp, found that justice as represented on the civic bench would not exclude these from the list of "ailments, diseases or complaints," and that he was therefore indebted to the Inland Revenue Department. It may appear to some, as it did appear to the defendant, almost ludicrous to include so small a matter as corn-painting within the limits of surgery. Yet this is a trifle which may involve much greater issues. Not once or twice has senile gangrene owed its rise directly to the handiwork of the chiropodist. As for corn and wart cures, most of us have had ample opportunity for observing their mischievous activity when, by ever so slight a trespass, they invade the tissues adjoining the insensitive object of their proper use. Even in regard to corns, therefore, there is a mode of rational treatment and a need of instructed skill which no Legislature, however desirous or indifferent, can permit itself to ignore; and this fact was expressed, though by no means too forcibly, in the sentence of conviction passed upon the defendant in the case above quoted.

PREVALENCE OF INFECTIOUS DISEASES.

SCARLET FEVER has shown some decline recently. During the week ended Feb. 18th considerably less than 1200 cases were reported in the chief towns of the country. The principal places in which it has prevailed besides the metropolis, where about a third of them occurred, were Swansea, Newcastle, Sheffield, Manchester, Liverpool, Leicester and West Ham. The numbers remaining under treatment in the fever hospitals of London and those admitted during the week were both considerably less than in the former week. Rather over 300 cases of diphtheria were reported in the same time, Manchester, Salford and West Ham furnishing the largest number of any place. The deaths in London from this disease still maintain their high rate, being threefold the weekly average. The greatest number of enteric cases occurred in London and Liverpool. Measles are reported to be prevailing at Bangor and Brechin, and schools in both places are closed on account of the disease. Influenza appears to be increasing and its mortality to be rising. Twenty-seven deaths occurred in London during the week ended Feb. 18th, compared with an average of seventeen in the previous three weeks. This malady is prevailing in the villages around Buntingford, where many children are stricken with the disease, causing the school attendance to fall particularly low. Influenza is also prevailing at Leeds, though it is said to be still of a mild nature.

HOSPITAL INQUIRY AT WATFORD.

ON Feb. 24th a public inquiry was held at Watford by Mr. Codrington, engineer inspector, and Mr. Sweeting, medical inspector, on behalf of the Local Government Board, into an application by the rural sanitary authority for a provisional order empowering them to compulsorily purchase certain lands for an infectious hospital, and for a loan to acquire certain other lands for the same purpose. The Hon. Sidney Holland appeared for the guardians and Mr. Trailey for the Watford Local Board.

TIBBITS v. ALABASTER AND OTHERS.

IN reference to the letter from Mr. Henry Sewill, which we published last week, offering to subscribe towards the expenses incurred by the proprietors of the *Electrical Review* in this action, the relations of which have important bearings for the medical profession, we have received a communication from Mr. James Swinburne, who is the hon. secretary of a fund being formed for this and cognate purposes. Doubtless Mr. Swinburne will be glad to furnish full particulars to any of our readers who may communicate with him at 49, Queen's-road, Wimbledon, S.W.

THE DRESDEN CONFERENCE.

SOME delay has occurred in the assembly of the International Sanitary Conference at Dresden, and it is believed to have been mainly due to the attitude of the French Government, who have very properly contended that in a matter involving such important medical principles as does the prevention of cholera the technical delegates ought not to be outweighed by diplomatic delegates, and that the action of the latter must perforce come secondarily to the conclusions of the former. We learn, however, from Dresden that the conference will probably meet next week.

THE OFFICE OF SUPERINTENDENT OF STATISTICS.

IN addition to Drs. Newsholme, Tatham and Whitelegge, to whom we have previously referred as candidates for the post of Superintendent of Statistics, which will shortly become vacant by the resignation of Dr. Ogle of the Registrar-General's Department, we now find that Dr. S. A. K. Strahan of Berry Wood, Northampton, has also applied for the appointment. Dr. Strahan, who has paid much attention to the subjects of heredity and insanity, is in addition to being a member of the medical profession a barrister-at-law and is the author of several works, including a paper on "Instinctive Crime" and a volume entitled "Marriage and Disease," which is largely based on statistical considerations.

RUPTURE OF VAGINA FROM A FALL.

DR. NICOLAUS OSTERMAYER of Budapest publishes in the *Gyógyászat* a case which is important from a medico-legal point of view, showing that rupture of the vagina may—under a certain combination of circumstances—be produced by an external blow which may leave no wound or other indication of its occurrence. A mill-worker forty years of age whilst carrying a heavy parcel in her arms fell down some stairs, her abdomen coming in contact with the edge of one of them. She was unconscious for half an hour and afterwards complained of great pain. When she went to bed she

found that there was some hæmorrhage from the vulva. She did not, however, apply for admission to hospital until three weeks after the accident. On examination a rent was discovered extending from the fornix obliquely downwards for about six centimetres almost completely through the mucous coat, the edges being sharp and smooth, five or six millimetres apart and bleeding slightly, thus giving the wound the appearance of being quite recent, although it was nearly three weeks old. In consequence of this the edges were simply sutured and they healed by first intention. Dr. Ostermayer accounts for the accident by supposing that the sudden and violent blow drove the contents of the abdomen, including the uterus which was retroflexed, violently downwards to the pelvic outlet, thus producing such a severe strain on the posterior vaginal fornix that it gave way. He thinks that the malposition of the uterus was probably an important factor in the case.

RHIZODONTROPHY.

UNDER this term are included two very different operations upon the dental organs, but both apply to the treatment of alveolar abscess. One is simply drilling a hole through the tooth into the pulp chamber and thus allowing a "vent" by which the pus may escape, which might be better called "tapping." The other is the excision of the apex of the root. In many cases of alveolar abscess the extreme end of the root becomes necrosed, and when necrosis takes place it almost invariably commences there, and no number of antiseptic dressings will stay the suppuration. Some years ago it was advocated in such cases to extract the tooth, cut off the diseased portion and replace it—which was called replantation; but this practice has fallen into desuetude, and the operation of rhizodontrophy has taken its place. With the improved apparatus at the command of the dental surgeon this operation is by no means so formidable as it seems—indeed, not so painful as many cases of cutting out sensitive dentine preliminary to stopping. The gum is incised, which may be done with little pain if cocaine be applied; the alveolus is drilled through by means of the dental engine, and the apex of the root is removed with a burr.

THE AREA OF SMALL-POX DIFFUSION.

IN answer to inquiries, we would point out that the statistics as to the area of diffusion of small-pox around the Fulham Hospital are embodied in two official publications—namely, the Medical Officer's Supplement to the Tenth Annual Report of the Local Government Board, entitled "On the Influence of Hospitals for Infectious Diseases," reissue of 1884, and the Report of the Royal Commission on Small-pox Hospitals, which is unfortunately out of print; but a paper in the *Practitioner* of March, 1887, supplies all the data, with even later information. From this it will be seen that during eight epidemics taken together the incidence of small-pox per 100 houses in certain areas within a zone of the hospital was as follows: Within a quarter of a mile 30·1 per cent., from a quarter to half a mile 14·5 per cent., from half a mile to three-quarters 9·5 per cent., and from three-quarters of a mile to one mile 4·6 per cent. The details as to each epidemic are recorded in the paper referred to. The data as to the Highgate Small-pox Hospital are given for the five years 1880–84 by Mr. Shirley Murphy in his annual report on the sanitary state of St. Pancras for 1884, and the report includes some carefully compiled maps showing the precise distribution of the small-pox cases in relation to the hospital. The numbers here involved are much smaller than in the Fulham case, but, summarising the results of the five years' distribution, we find the percentages of attack on houses to be as follows: Quarter-mile radius, 21·8; half-mile radius, 0·81; three-quarter-mile radius, 0·45; one-mile radius, 0·55. In the introductory report to Dr. Barry's well-known official volume on the small-pox epidemic in Sheffield the percentage of houses attacked within given circles around the hospital is calculated somewhat differently. On houses within 0–1000 feet from the hospital the rate was 1·75, on 1–2000 feet it was 0·50, on 2–3000 feet it was 0·14, on 3·4000 feet it was 0·05, whilst on the remainder of the borough it was 0·02.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—The official name of the ancient town of Dorpat is being changed to Turieff or Jurjew. The resignation is announced of the Professor of General Pathology and Pathological Anatomy, Dr. Richard Thoms, who was appointed to succeed the late Dr. Böttcher nine years ago.

Oporto.—Senhor Ricardo de Almeida Jorge has been appointed Secretary of the Medical School.

Vienna.—The selections for the chair of Medicine vacated by the death of Professor Otto Kahler are: (1) Professor Erb of Heidelberg, (2) Professor Naunyn of Strassburg (3) Professor Von Jaksch of Prague.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. G. Longhi, *privat-docent* in Otology and Laryngology in the University of Pavia.—Dr. Robert Fredrik Fristedt, Extraordinary Professor of Pharmacology and Medical Natural History in the University of Upsala, at the age of sixty. For many years he was editor of the Journal of the Medical Association of Upsala, and he had published a "Text-book of Organic Pharmacology and Studies in General Pharmacognosis."—Dr. Constantin Rose, formerly Professor of Medicine in the University of Warsaw.—Dr. Agostinho Vincente Lourenço, medical officer and Professor of Chemistry to the Lisbon Polytechnic.

DURING the month of April a daily course of lectures (with practical work) on bacteriology will be given by Professor Crookshank in connexion with the London post-graduate course. The course will commence on Monday, April 11th, and will end on Friday, April 22nd. Practitioners who can spare a fortnight from their work will find the instruction specially suited to their wants. A course of hygiene will also be given between the above dates by medical officers of health.

WE regret to have to announce the death, which occurred on the 23rd ult., at Paris, of Dr. Benjamin Ball, at the comparatively early age of fifty-eight. The deceased was a Professor in the Medical Faculty of Paris, Physician to the Hôpital Laennec and the Asile Sainte Anne, a Chevalier of the Legion of Honour and member of many learned societies. We reserve a full obituary notice of this able physician for our next issue.

HER MAJESTY the Queen has given a further contribution of 20 guineas to the East London Hospital for Children at Shadwell.

SIR THOMAS ARCHER COLT, Bart., M.A., M.D.Glasg., died at his residence, Maidencombe, Torquay, on Sunday last.

THE late Dr. Thomas Hawksley of Chertsey has bequeathed to the Royal Medical Benevolent College the sum of £100.

A SUM of £5000 has been sent anonymously to the Leeds Infirmary.

AT Cairo, on Feb. 24th, in the presence of his Excellency Riaz Pasha and other personages of the Egyptian Court, Professor Semmola of Naples delivered a lecture on the kidney and its maladies before an audience of medical practitioners and students of various nationalities. The lecture, by request of the leading physicians at whose instance it was given, will shortly be published.

THE annual general meeting of the Irish Medical Schools' and Graduates' Association will be held at 11, Chandos-street, Cavendish-square, on St. Patrick's Day, Friday, March 17th, at 6 P.M. On the same evening the members of the Association will dine at the Holborn Restaurant at 7.30 P.M., the President, Professor Cuming, M.A., M.D., in the chair.

THE POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

DEPUTATION TO SIR WALTER FOSTER.

A DEPUTATION representing the Council of the Poor-law Medical Officers' Association waited upon Sir Walter Foster, M.P., on Tuesday at the offices of the Local Government Board, Whitehall. The deputation consisted of Mr. D. B. Balding (chairman of the Council), Mr. J. Wickham Barnes (secretary), Mr. C. Frost (treasurer), Mr. J. B. Gidley-Moore, Mr. Nelson Hardy, Dr. Hugh Woods and Dr. Walter Smith.

Mr. BALDING thanked Sir Walter Foster for his courtesy in agreeing to receive the deputation. The subjects they had to bring before him were not many, but they were very important. They were subjects which, in the opinion of the Council, were ripe for legislation, and it was the hope of the deputation to bring him to the same view. The first point he wished to emphasise was the advisability of extending the dispensary system in force in London and elsewhere to all large towns and populous places in England and Wales. Being himself a rural practitioner he could see difficulty in the way of extending the system throughout the rural districts at the present time, and therefore he did not urge such an extension; but he strongly urged it for all large towns and populous places. The difficulty with the rural districts was that there at the present time the practitioners dispensed their own medicines, and consequently it would not be easy to establish dispensaries in the infirmaries. His hope, however, was that in the course of a few years this objectionable practice on the part of medical men would die out. It was already dying out. He hoped the time would soon come when neither pauper nor any other patients would have their medicines dispensed by the medical man who prescribed them. It was generally admitted that the system of making the salary of Poor-law medical officers include medicines was highly objectionable, and he thought this department would do well to put an end to it, even before dealing with the dispensary question. In making arrangements with medical officers there should be a specific sum for remuneration and a specific sum for medicines. The young medical practitioner would then know exactly what his actual salary amounted to. At present it was a misnomer to speak of the money paid as salary. Half of it might go for medicine. As to the superannuation question, he thought Sir Walter Foster would agree that it was in a very unsatisfactory position. After a man had worked twenty, thirty or forty years in the service of the public he found himself entirely at the mercy of his local board. The members of that board might have acceded to office when the medical officer had become old and their only thought would be how to get rid of him easiest. He knew of many cases of hardship in this connexion, but he would not trouble Sir Walter Foster with them. The next point to which he wished to allude was pauper nursing. This nursing was of necessity inefficient. It was inefficient on account of the ignorance of the nurses. Moreover, the great majority of the present pauper nurses were not able-bodied women; they had no responsibility and they received no remuneration As to the question of the administration of anæsthetics, he desired to remind Sir Walter Foster that whilst during the last thirty or thirty-five years the administration of anæsthetics had become a necessary part of all medical practice no provision had been made by the Local Government Board for it in pauper practice. The paupers had had to trust entirely to the good will and charity of their medical attendants for the administration of anæsthetics. If they had not had anæsthetics in any case it was because it was out of the power of the medical man to provide them.

Mr. NELSON HARDY said that while the Association had seen with great pleasure the increased attention given of late to the treatment of various sections of the poor under the Poor-law, they could not disguise the fact that much still required to be done. Long ago the first president of the Association (Dr. Joseph Rogers) had urged that it was good policy, both on grounds of humanity and from the ratepayers' point of view, to see the sick poor in our workhouses efficiently treated. Dr. Rogers came to that conclusion after having experience in the Strand and Westminster Unions. He (Dr. Rogers) advocated proper accommodation for patients, the supply of drugs by the authorities and the abolition of pauper nursing. The Gathorne Hardy Act had worked a great change in London. He knew there had been difficulty in carrying out the Act, and he desired to give the fullest degree of praise to the inspectors of this department for their zeal and ability in the matter. But a great revolution had been quietly, almost silently, worked in the metropolis. The infirmaries would compare favourably with any of the old-established hospitals, the nursing was excellent, the dieting was all that could be desired, the drug-supply contained the latest additions to the Pharmacopœia, and, indeed, everything was done for the pauper patients that science and the highest medical skill could suggest. Now, it appeared to the Council that this Act of 1867, which dealt only with London, should be extended in principle all over England and Wales. They asked that in every large town or town with 50,000 inhabitants a separate infirmary should be established in connexion with the workhouse; that in the smaller towns the dispensary system should be established; that in country districts, where it would be difficult to establish dispensaries, the boards of guardians should pay for the drugs; and that in all cases pauper nursing should be done away with as far as possible. They did not ask for any new or untried system, but for one which had been working in the metropolis for a quarter of a century, and in many other places, such as Birmingham, Liverpool and Cardiff. It was quite feasible and possible. Already hundreds of thousands of the sick poor had had occasion to bless the Act of 1867, whether they knew about it or not, and he believed that an extension of that Act fairly applied would do immense good to the sick poor throughout England and Wales.

Mr. J. WICKHAM BARNES said that, as Secretary of the Association, he had had some opportunity of measuring the importance of the question of superannuation. He had received letters from all parts of the country expressing the hope that a system of compulsory superannuation would be established. Medical officers did not wish it entirely for their own benefit, which of course was very important, but they urged it also in the interests of the sick poor. It often happened that medical men continued in office when they were really unable through old age or infirmity to carry on their work properly. They did so because they had nothing to live on except the salary they received. What they were aiming at was a fund raised one-half from the salaries of the officers and one-half from the boards of guardians. He believed the opinion of Mr. Hardy, the actuary, to be that 2 per cent. from the salaries and a like amount from the boards of guardians would produce a sufficient fund for superannuation. He hoped Sir Walter Foster would do what he could for the objects they had in view, and he could assure him of the gratitude of the whole profession.

Mr. BALDING said he wished to explain that the present system was unsatisfactory for this special reason: that it was left to the will and pleasure of individual boards of guardians to decide matters of superannuation. He believed it to be the contention of the Local Government Board that the initiative lay solely with the boards of guardians. The result was that those medical officers who had been worst paid during a long period of service received the worst treatment in the end; many of them were just able to escape the workhouse.

Dr. WALTER SMITH, who was the last member of the deputation to address Sir Walter Foster, reminded him that no one could apply for superannuation until he actually resigned. This he considered to be a great blot. After twenty-three years' service as a medical officer in London, he could bear testimony to the great value of the dispensary system. At the same time he thought it capable of improvement, even in

London. He would like to see some relation between the general hospitals and the poor-law dispensaries and infirmaries, which he thought should be utilised for medical instruction.

Sir WALTER FOSTER, after thanking the members of the deputation for their attendance, said their suggestions grouped themselves mainly under two heads; first, the methods of administering medical relief to the poor; and second, the grievances of medical officers in reference to superannuation. He had very strong sympathy with them in their views about the extension of the dispensary system. When he first entered medical practice, when he was an apprentice, he had an opportunity of seeing how well the dispensary system worked in Ireland. It was partly through him that this system was started in Birmingham by his colleague, Mr. John Clay, a good many years ago, and he had many conferences with him with reference to the usefulness of this method as compared with the older method. He (Sir Walter Foster) viewed with great favour the extension of this system wherever it was practicable throughout the country. They had arranged for it in many large towns—Birmingham, Cardiff, Plymouth, Reading, Wolverhampton and elsewhere. It was true that they had not made any extensions during the last few years; but dispensary regulations, when they came before the Local Government Board, were always received with considerable favour, and he should be glad very often to do this if he could do it without injustice to vested interests on the part of medical men. In one of the last cases that came before them they had to consider that the district medical officers would be adversely affected by the system; but the policy of the Board was, wherever they could, to encourage this system of the extension of dispensary methods. There were, no doubt, difficulties in the way of its application in rural districts. The Board had no sympathy whatever with the practice of obliging medical men to find drugs. They had discouraged it as much as they could, and they would be prepared to discourage it in the future. The inclusion of this amount for drugs in the salary of the medical officer had an indirect bearing upon the superannuation allowance. Sometimes it had a very direct bearing. Still, he did not think it was a right thing that a medical man should have to find drugs out of his salary, and wherever he could do so they might be sure he would discourage it. What Mr. Balding had said with reference to the administration of anæsthetics had his entire sympathy. There ought not to be any possibility in this country of a pauper not having all the advantages of treatment enjoyed by the inmates of our hospitals when they were required, and the advantages, moreover, enjoyed by any other people in the community. As far as he could influence the matter, they might be assured there would be no disadvantage borne by the pauper sick in this connexion. As to assistance for operations, he might say that the Board were continually having cases in which moneys were asked for such assistance, and the practice of the Board was to authorise the payment of such moneys. Of course in the first instance they had to deal with the boards of guardians, but he was sure that as time went on the boards of guardians would be actuated by a liberal spirit in all those matters. The Board would certainly encourage them in that direction, and he hoped that no difficulty about the use of anæsthetics would occur in the future. If it did, he would be very glad to receive representations on the subject and give them his best consideration. As to the nursing, the Board had issued a circular in the early part of this year, and they were doing all they could to discourage the system of pauper nursing. They regarded it not only as inefficient and improper, but as a costly method of doing the work. The whole influence of the Board was being exerted to do away with this system in all the workhouses of England and Wales. At the same time, when one came to look at the figures, the state of things was not so very unsatisfactory. They had in London one paid nurse, who presumably was more or less trained, to every fourteen patients. In the provinces the ratio was one to every twenty-five patients. That was not a very bad proportion, although he hoped it would be reduced in course of time. Their desire was to bring about efficient and capable nursing in every workhouse and infirmary, so that the poor, who, after all, were the most sacred charge committed to them, would have proper attention in their illness, as others had in hospitals and their own homes. The question of superannuation was one of considerable difficulty. There were two things that occurred to him. First of all they must remember that these medical officers in most instances were only giving a part of their time to the discharge of their duties, and consequently did not come into the same category as other public servants who gave the whole of their time. They were not, for instance, in the same position as the staff of the Local Government Board, who came here in the early morning and left late in the evening and devoted the whole of their working hours to the service of the department. Again, the medical officers got their salary from the local authorities. It was not State-paid money. If they were State officials in a central department paid out of the Consolidated Fund of the Exchequer, they would be in a somewhat different position as regards superannuation. But they came before him as officials of the different local authorities throughout the country, who naturally had the initiative in making any recommendation as to superannuation.

Dr. WALTER SMITH said that a portion of the money came out of the Consolidated Fund.

Sir WALTER FOSTER admitted that there was a grant in a certain way. As to superannuation, he felt that in a large number of cases the medical profession was not treated well, and that it ought to be treated very differently. The importance of the duties they performed and the amount of devotion and self-sacrifice they exercised ought to be recognised by the local authorities, who had the control in their own hands. At this Board they did all they could to improve the position of the medical officers, not only as regards salary, but also with reference to superannuation. That policy, he hoped, would be continued for many years to come. There were two points they ought to consider seriously. First of all, by letting men have a fair prospect of proper and adequate superannuation when they were past work, they insure a better attention to the sick poor, which was the first duty of this Board. Their first duty was to see that the sick poor of this country were provided with the best, most tender and most skilful medical care that they could obtain, and he believed that a man would give more care and attention to that kind of work if he had the prospect of being liberally treated, and he considered that superannuation was one of the best directions in which such liberal treatment could be extended. They also felt that superannuation would enable a man to retire before he became inefficient, instead of hanging on to one of these poorly paid parochial appointments. He had known cases of great hardship not only to the medical men, but also to the sick poor. What he recommended the Association to do was to draw up some workable scheme of superannuation. They had the example before them of the teachers, who had won their way to a concession of this kind within the last few months, and who had had that crowned by the practically unanimous vote of the House of Commons the other night. Let the members put their heads together and use all the powers of the Association to try to produce some feasible scheme in connexion with an actuary, who would put it on a proper basis. They would then be able to agitate for what was after all a just recognition of the services of the medical officers. He hoped as time went on that they would have in the rural districts a differently constituted body to the board of guardians, a body which would be more in sympathy with the medical officers and with whom they would be able to work better. He looked with great confidence, and he might say with great earnestness, to the position of the medical officers of the poor-law service being improved generally throughout the country. He did not know any service which demanded more self-devotion and self-sacrifice, and he knew no service so inadequately and miserably remunerated. All his sympathies were with them, and as long as he occupied his present position they might rely on his doing for them all he could within the limits of his powers.

After thanking Sir Walter Foster for receiving them and for the remarks he had made, the deputation withdrew.

LORD SALISBURY AT OXFORD.

THERE is a touching story told of a soldier of the Grand Army who remarked to the surgeon probing a wound over his heart, "A little deeper and you'll find the Emperor." Below the noisy surface of party politics the ever pressing and ever present needs of a common humanity claim the interest of all and are above the strife of faction. No more appropriate spokesman for the building fund of the Radcliffe Infirmary could have been found than the Marquis of Salisbury,

whose eloquent appeal was interspersed with terse and epigrammatic utterances. We are especially gratified to note the terms in which his lordship spoke of "one of the greatest of the sciences, the science of medicine." After some reassuring utterances as to the permanent place belonging to the classics in a liberal education, he finely remarked of medicine "there is no other science which is another name for a work of mercy," and tersely defined science to be "that account of causes which will end in knowledge." After humorously likening our bodies in their battle against microbes to a republic in a permanent state of civil war, he predicted that bacteriology would be the great study of the coming generation and closed an address permeated by the spirit of the new learning with the words: "In helping forward the infirmary ..... you are letting in another brick, another row of bricks, into that mighty edifice of intellectual supremacy and intellectual culture which has made this place famous above all other places in the world." We are glad to note that the subscription of a handsome sum was announced, and trust that the Radcliffe Infirmary may in every sense become worthy of the historic temple of learning in which it must in future form a very important feature.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE news from Russia is not altogether favourable, but the absence of cholera reports from other countries is satisfactory. Cholera, nipped by the severe frosts and cold weather, still appears to manifest itself in certain parts of Russia. The *Official Gazette*, which is not likely to exaggerate matters, admits that between Jan. 1st and Feb. 7th returns have been received from fourteen provinces announcing the presence of the disease, and that there have been 973 seizures and 369 deaths. Although these are not large numbers according to the size of the populations their significance consists in the wide diffusion of the disease and in the fact that it exists in frontier provinces, like Podolia and Kieff. This tends to strengthen the belief that cholera is likely to make its appearance in Western Europe in the coming summer. Whether the very severe cold, which has since been reported as prevailing almost throughout the whole of Northern and Central Russia at the end of last month, has had any further repressing effect on the disease we shall learn later on.

The Conference which is to meet at Dresden for the purpose of determining, among other things, how far the latest developments of science can be utilised against the progress of cholera with the least disturbance of traffic promises to be a very important gathering of officials and experts from most of the Great Powers. It is thought that, although the Conference may not be unanimous on all points, England, Germany and France are pretty well in accord as to the principle that should be adopted and followed in future sanitary enactments and regulations.

From Vienna we learn that some interesting experiments have been carried out at Professor Stricker's Institute of Experimental Pathology in regard to Koch's comma bacilli. Towards the end of last year and the beginning of this Dr. Hasterlik and four others experimented on their own persons by swallowing doses of comma bacilli. In some, diarrhœa and slight pyrexia subsequently appeared at periods varying from thirty-six hours to five or seven days after the consumption of the bacilli. All are now, however, in perfect health, although the existence of bacilli is stated to have been established in the excreta of each case. It is difficult to say how far the symptoms which appeared in some of these cases were really attributable or not to this experimental dosage. Professor Drasche informed the Medical Society that in a few of the fatal cases of cholera at Hamburg no bacilli were found, while they were traced in the cases of some patients twenty-three days after recovery.

Professor Arndt of Greifswald, as the result of his investigation of the late outbreak at the Nietleben Asylum, near Halle, in connexion with the history of that at Nanterre and other explosive outbreaks at different places, has come to the conclusion that in such cases, where it was impossible to trace the introduction of cholera, it was not really introduced at all, but was home-grown, and that the great practical lesson to be derived is the supreme importance of hygiene. We have already referred to Professor Arndt's observations in THE LANCET of Jan. 28th. His views appear in some measure to approach those of Professor Peter, of the Necker Hospital, Paris, who regards these outbreaks as a sort of involuntary experimental pathology in the local manufacture, as it were, of cholera under the fostering influences of overcrowding, bad water, bad food and bad air.

CHOLERA IN FRANCE.

(FROM OUR SPECIAL CORRESPONDENT.)

A VISIT TO GRAND FORT PHILIPPE.

Treacle, Cognac and Cholera.—The Twenty-two Infected Communes.—Cholera and the Canals.—An Infected Fishing Village.—Fish for the Paris Market.—The Government Medical Emissaries.

THE presence of cholera in the town of Dunkirk, as already stated, was officially recognised on Sept. 1st, 1892, though a suspicious case had previously occurred. Twenty-three days elapsed before the disease spread beyond the town. Then some cases occurred in the commune of Steene, at a place called Mille Brugghe, amongst the workmen engaged at a large alcohol distillery. It is important to note that at this distillery treacle imported from Hamburg is used. The treacle is transferred from Hamburg ships to barges in the port of Dunkirk and reaches the distillery by the canal. There were 10 cases and 7 deaths. The next cases of cholera occurred in the suburb of Dunkirk called Rosendael, where 10 cases and 3 deaths were recorded. This began on the 26th. Then another suburb, Coudekerque Branche, was infected; on Oct. 2nd there were 12 cases and 2 deaths. The fifth district attacked, Warhem, but where only 1 case and 1 death occurred, is some distance off, though, like the preceding places, it is also on the banks of a canal. The sixth, Bray-Dune, with 1 case and 1 death, and the seventh, Ghyvelde, with 2 cases and no deaths, face each other on the Canal de Furnes; and the eighth place, Zuydcoote, is near at hand on the same canal, and had 3 cases and 1 death. These three places were infected between Oct. 14th and 17th; the number of cases and deaths was very trifling, and this is particularly interesting because the Furnes canal is the cleanest canal in the neighbourhood and runs close to the seashore, where the air is particularly pure and bracing.

It will be remembered that in the town of Dunkirk there had been 9 deaths between Sept. 1st and 24th. That seemed to be the end of the first invasion. Then, again, the epidemic broke out in a different district and with a different class of people, and there were 6 deaths between Oct. 9th and 28th. In the communes surrounding Dunkirk there was also an interruption in the course of the epidemic; but as it began later there were only two series. The first series lasted from Sept. 23rd to Oct. 17th in the seven communes mentioned above, and there were in all 39 cases and 15 deaths recorded. This was followed by a respite which lasted for more than a month.

At the small town of Bourbourg, on the canal which runs from Calais to Dunkirk, cholera occurred on Nov. 12th; there were 3 cases and 1 death. On the banks of the same canal in the Cappelle there occurred on the same day a case and a death. On Nov. 13th the epidemic reached Bourbourg-Campagne (11 cases and 2 deaths), and on the 14th Armbouts Cappel (2 cases but no deaths). It was on Nov. 17th that the cholera reappeared in Dunkirk, and the first case was that of a bargewoman in the Jeanty branch of the Bourbourg canal, and other bargewomen and their children fell ill from the disease a few days later. Thus, if in the first instance the rural districts were infected by Dunkirk, it seems as if, at the second outburst of cholera, it was the rural districts or the inland canals that had infected Dunkirk. The epidemic continued, reaching Crayvich on Nov. 18th and causing 4 cases and 3 deaths. On the 19th there was 1 case at Leffringkouche, and on the 22nd 1 case and 1 death at Spyker and 1 case and 1 death at Saint Mouielen. On the 24th it reached Petit Synthe, causing 1 case and 1 death; and on the same day the great epidemic at Grand Fort Philippe commenced, which caused 110 cases and 35 deaths. Two days later the cholera was at Watten—1 case 1 death. On Dec. 5th it reached St. Pol-sur-Mer—11 cases and 4 deaths; on the 6th, Berque—4 cases and 2 deaths; and on the 15th and 16th there was a case at Fort-

Mardyk and another at Lederzeele, but no deaths. Altogether, during this second series, there were 15 communes infected and 163 cases recorded, resulting in 54 deaths. The grand total for the two separate outbreaks of cholera is 192 cases and 69 deaths, occurring from September 23rd to December 16th in 22 communes out of the 65 which constitute the arrondissement of Dunkirk. If to this be added the township of Dunkirk, there are, for the arrondissement, 23 communes infected and a total of 251 cases and 104 deaths.

The most important fact that the history of this epidemic brings forth is the manner in which cholera has followed the banks of the canals. This is more evident if one notes the actual groups of houses where the cases occurred. In the communes named the largest cluster of houses, or village that gives its name to the communes, may be some distance from a canal, but that portion of them where cholera occurred is, with one exception, close to one. The one exception is Spyker, and there was in this place but one case and one death. Not only were the majority of cases on the banks of the canals, but where the canal was clean there were very few—namely, at Bray-Dune, Ghyvelde, Zuydcoote and Leffringkouche. In these four places there were but seven cases and two deaths, but they were all situated on the Furnes—that is, the cleanest canal. Not only did the infection travel along the canals, but the largest proportion of the victims were concerned in the working of barges and other occupations connected with canal traffic. The contagious nature of the disease was, on several occasions, very clearly established. Thus, at Crayvich, a bargewoman was taken with cholera and was nursed by her husband. The latter caught the disease and died rapidly. The son, hearing of his parents' illness, travelled a considerable distance to come to their aid. On his father's death he undertook to nurse his mother, but he very soon contracted cholera and also died. Thereupon a friend, a man who had been through many foreign campaigns, had seen cholera before, and who declared he entertained no fear, volunteered to nurse the sick woman; but in a very short time he also fell ill and died. Thus three persons died in their endeavours to nurse the woman who was ill in the cabin of her barge. At so insignificant a village as Crayvich there were no means of nursing these patients, and it was not considered safe to convey the barge to Dunkirk or some other place where the patient might have been taken to a hospital. After the third death occasioned by this one case it was difficult to find anyone willing to attend to the patient, but a poor woman who was eighty years old volunteered. She argued that she had at least but few more years to live and did not mind dying a little sooner if she could be of service. This brave old woman was, however, the only one of the four persons who had nursed the sick bargewoman who escaped, and she had further the satisfaction of seeing her patient recover. This dramatic incident opens up the question as to what should be done when cholera breaks out on a barge at some distance from a hospital and in a poor rural district. Probably there would have been no spead of the disease at all had the patient been at once removed to a hospital. For inexperienced persons to attempt to nurse a cholera case in the confined space of a barge cabin was, of course, a most dangerous undertaking.

By far the most important epidemic, when taken in proportion to the population, is that of Grand Fort Philippe, a fishing village near Gravelines, which has only 2700 inhabitants. From Dunkirk I was able to reach Gravelines by train, and from thence to the fishing village the distance is not great. It is a poor miserable place, consisting of little cottages, built anyhow and anywhere, without plan or order. Consequently, it is not even possible to construct a gutter in the streets. Occasionally I came across the semblance of a gutter, but the contents did not drain away from the village. The contents of one or two gutters, on the contrary, flowed towards the centre of the straggling habitations and there formed stagnant pools of foul water. Some houses had cesspits, others had merely a dung-heap in front of their doors or in the back garden or yard. Here the cholera dejections were thrown and covered over with warm, fermenting manure. Sometimes the dejections were simply thrown out into the streets. It is difficult to say how the epidemic reached this place; it is only too easy to understand how it spread. According to one theory, the first case was that of a young sailor or fisherman who came from Calais; but several children had previously suffered from very severe "cholerine." At the same time a butcher went to Bourbourg, where there had been some cases of cholera, and was taken ill on his return to Grand Fort Philippe. This occurred between Nov. 15th and 20th. But the inhabitants were very anxious to keep the matter secret—they depend for their existence almost exclusively on the sale in the Paris market of the fish which they catch. There are 115 fishing smacks at Grand Fort Philippe, and when the fish are brought to land they are at once packed and sent by rail to Paris. The inhabitants imagined that they would not be allowed to sell their fish if it were known that there was cholera at Grand Fort Philippe. However, on Jan. 1st, 1893, no less than five deaths took place on the one day. The patients were aged respectively thirty, five, three, forty-three and eighteen years. Next day there were two deaths, both of adults. On New Year's Day there were sixty persons in bed supposed to be suffering from cholera. The worst period was from Dec. 22nd to Jan. 7th, and concealment was no longer possible.

The Government, apprised of the gravity of the situation, sent two medical men from Lille and a portable disinfecting stove. Under the direction of these medical men, forty houses were disinfected. They also interfered with the carrying of the corpses into the church and prevented the wakes which the fishermen held over the bodies of their friends who died from cholera. Then it was arranged that the hampers and boxes in which the fish are packed should first be washed in a mercurial solution and then soaked in sea-water; and it was only after this had been done that the fish were sent to the Paris market. Finally, a large room, which had once served as a sort of café, or drinking-shop, was converted into a cholera hospital, and here also was kept the disinfecting stove. This wine shop has windows only on one side, the floor is dirty and of wood, and altogether it did not answer to any of the conditions necessary for hospital purposes. By the time this was organised the epidemic was nearly over; it had, however, spread to the neighbouring commune of Oies, which is not comprised in the arrondissement of Dunkirk. This commune has 1200 inhabitants, but there are only 200 of them in the infected part. Here 12 cases and 8 deaths occurred. On the other hand, at Petit Fort Philippe, which is only separated from Grand Fort Philippe by a narrow river, there have been no cases whatever. There were five new cases at Oies when I was on the spot, and I visited one of the patients. in the back room of a small cottage, which was used as a kitchen and general sitting-room, and in which there was an alcove with folding doors. Inside this alcove there was a boy who would insist on having the doors closed, though this deprived him of both air and light. Still, he seemed to fancy himself better when placed in these unwholesome conditions. Nor were his parents able to appreciate any arguments in favour of ventilation; they thought the disease could be best combated by locking the patient up in a cupboard. From this place I visited the streets and cottages where the greatest number of cases had occurred. In the Rue Dauphine, for instance, where there had been many deaths, I found that the floors of the little cottages were below the level of the street, so that it was necessary to step down on opening the doors. Close by there was the Grande Pompe, a pump communicating with a shallow well. All around there was slop water stagnating, and it was evident that the water of the well could not escape contamination. In the Rue de Toulouse I saw a house where 4 cases and 2 deaths occurred; a youth and a young girl died here after only eight hours' illness. A pump was against the wall of this house, but fortunately the handle had been broken off. This, however, was but a recent achievement, and the water gathered from under this cholera-stricken house had been drunk during the epidemic. Cases were related to me of patients who refused to have their bedding disinfected, and who kept potatoes under their beds and cholera patients on them; in a word, the population has no conception of what sanitation means or of what precautions should be taken. The two medical men, sent somewhat late in the day by the Government, have had a hard and ungrateful task to perform. The population was quite incapable of appreciating the good they attempted to do, and, when they tried to close some of the worst wells, made loud complaints.

What impressed me most forcibly was the utter want of order and method in the construction of this fishing village. Grand Fort Philippe is situated in the angle formed by a small river and the sea. The place would be exceptionally healthy if the houses had been so placed as to possess a natural drainage either towards the sea or towards the river; but no such care has been taken, as there are, of course, no sewers,

there are practically no gutters and very few cesspools. All the filth remains on the ground except that which gradually percolates into and contaminates the subsoil. If one adds to these unsanitary conditions the smallness and dampness of the cottages, and the bad and insufficient food of the poverty-stricken population, there are present very favourable conditions for the development of a cholera epidemic. Considering that Grand Fort Philippe, by reason of its 115 fishing smacks, which often call at other ports under stress of weather or to seek a market for their fish, is not confined within itself, and considering also that the other communes infected in the Dunkirk arrondissement are on the borders of canals that have ramifications extending over a great portion of France and over several other countries, it will be seen that the prevalence of cholera in and about Dunkirk is a matter of more than local interest.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual General Meeting.

THE annual general meeting of this Society was held on March 1st, the President, Sir Andrew Clark, in the chair.

The annual report and the treasurers' statement of accounts were presented by the Council. The report stated that the floating building debt had now been reduced to a very small sum, and the experience of the past year gave every reason to hope that as soon as this was cleared off the treasurers would be able to begin a sinking fund for the repayment of the debenture debt. After discussion, the report and statement were adopted by the meeting.

The annual address was delivered by the President. Some account of the work of those Fellows who had died during the past year having been given, Sir Andrew Clark spoke on the subject of confederating the various medical societies, and stated that in all probability steps would shortly be taken to elicit the opinion of the profession upon this queston.

The following is a list of the officers and Council who were elected to serve during the ensuing year:—President: Sir Andrew Clark, Bart., F.R.S. Vice-Presidents: Dr. William Selby Church; Dr. Frederick William Pavy; Mr. Thomas Pickering Pick; Mr. Henry Power. Treasurers: Dr. Charles John Hare; Mr. John Ashton Bostock. Honorary Secretaries: Dr. John Mitchell Bruce; Mr. Rickman J. Godlee. Honorary Librarians: Dr. Samuel Jones Gee; Mr. John Whitaker Hulke. Members of Council: Dr. George Thin; Dr. Sidney Coupland; Dr. Alfred Baynard Duffin; Mr. Thomas Tillyer Whipham; Dr. Philip Henry Pye-Smith; Mr. William Henry Bennett; Mr. J. Neville C. Davies-Colley; Mr. Alban H. G. Doran; Mr. A. Pearce Gould; Dr. George Eastes.

A vote of thanks to the retiring honorary secretary, Dr. Frederick Taylor, concluded the business of the meeting.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6406 births and 3909 deaths were registered during the week ending Feb. 25th. The annual rate of mortality in these towns, which had declined in the preceding seven weeks from 29·2 to 19·2 per 1000, rose again last week to 19·7. In London the rate was 19·7 per 1000, and almost corresponded with the mean rate in the thirty-two provincial towns, which was 19·8 per 1000. The lowest rates in these towns were 13·9 in Huddersfield, 15·5 in Swansea, 16·1 in Derby and 16·7 in Bristol; the highest rates were 22·5 in Norwich, 22·9 in Burnley, 24·9 in Croydon and in Portsmouth, and 28·5 in Bolton. The 3909 deaths included 386 which were referred to the principal zymotic diseases, against 361 and 368 in the preceding two weeks; of these, 94 resulted from whooping-cough, 93 from measles, 66 from diphtheria, 50 from diarrhœa, 41 from scarlet fever, 29 from "fever" (principally enteric) and 13 from small-pox. The lowest death-rates from these zymotic diseases were recorded in Birkenhead, Leicester, Halifax, Brighton and Bristol, and the highest rates in Croydon, Plymouth, Norwich, Portsmouth and Bolton. The greatest mortality from measles occurred in Newcastle-upon-Tyne, Croydon, Leeds, Cardiff, Portsmouth, Plymouth and Bolton; from whooping-cough in Nottingham, Birmingham and Norwich; from "fever" in Burnley, Wolverhampton and Sunderland; and from diarrhœa in Sunderland and Blackburn. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria included 51 in London, and 2 each in Croydon, Bristol, Salford and Bradford. Four fatal cases of small-pox were registered in London, 3 in Manchester, 2 in Liverpool, 2 in Oldham, 1 in Bolton and 1 in Salford; 152 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 18 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2293, against 2580, 2513 and 2402 on the preceding three Saturdays; 178 new cases were admitted during the week, against 257 and 217 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 984 to 350 in the preceding six weeks, rose again to 427 last week, but were 63 below the corrected average. The causes of 95, or 2·4 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Cardiff, Derby, Newcastle-upon-Tyne and in five other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Norwich, Sheffield and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·2 and 22·1 per 1000 in the preceding two weeks, further declined to 20·4 during the week ending Feb. 25th, but exceeded by 0·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·4 in Greenock and 16·1 in Leith to 22·5 in Aberdeen and 30·8 in Dundee. The 576 deaths in these towns included 42 which were referred to measles, 17 to whooping-cough, 10 to scarlet fever, 10 to diphtheria, 4 to diarrhœa, 3 to small-pox and 3 to "fever." In all, 89 deaths resulted from these principal zymotic diseases, against 109 in each of the preceding two weeks. These 89 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 1·3 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 41 to 57 in the preceding three weeks, declined to 42 last week, of which 17 occurred in Dundee, 14 in Glasgow and 9 in Edinburgh. The 17 deaths from whooping-cough showed a decline of 5 from the number in the previous week, and included 14 in Glasgow. The fatal cases of scarlet fever, which had been 13 and 8 in the preceding two weeks, were 10 last week, of which 4 occurred in Glasgow, 3 in Edinburgh and 2 in Leith. The deaths referred to diphtheria, which had declined from 11 to 8 in the preceding three weeks, rose again to 10 last week, and included 5 in Glasgow and 3 in Leith. Of the 3 fatal cases of small-pox, 2 occurred in Glasgow and 1 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 182 and 165 in the preceding two weeks, further declined to 135 last week, and were 30 below the number in the corresponding week of last year. The causes of 57, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·3 and 29·7 per 1000 in the preceding two weeks, declined again to 27·4 during the week ending Feb. 25th. During the past eight weeks of the current quarter the death-rate in the city has averaged 29·0 per 1000, against 23·2 in both London and Edinburgh. The 184 deaths in Dublin during the week under notice showed a decline of 15 from the number in the preceding week, and included 2 which were referred to whooping-cough, and 2 to "fever," but not one either to small-pox, measles, scarlet fever, diphtheria or diarrhœa. In all, only 4 deaths resulted from these principal zymotic diseases, again 7 and 14 in the preceding two weeks. These 4 deaths were equal to an annual rate of 0·6 per 1000, the zymotic death-rate during the same period being 2·1 in London and 1·4 in Edinburgh. The 2 fatal cases of whooping-cough exceeded the number

recorded in any recent week. The deaths referred to different forms of "fever," which had been 4 and 7 in the preceding two weeks, declined to 2 last week, and were fewer than in any week since December last. The 184 deaths registered in Dublin last week included 34 of infants under one year of age and 60 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon those recorded in the preceding week. Seven inquest cases and 7 deaths from violence were registered; and 56, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

THE following officers have arrived at Aldershot to undergo instruction in bearer company drill:—Surgeon-Lieutenants Berryman, Buswell, Crawford, Farmer, Longhurst, Mangan, Pollock, Rivers, Ryall, Samman, Symons and Taylor. Brigade-Surgeon-Lieutenant-Colonel O'Brien has embarked for Barbadoes and Surgeon-Major Fowler for St. Helena. Surgeon-Major Nicholson and Surgeon-Captain Porter are embarking in the *Malabar* for India. Surgeon-Majors Day and Maclean have been invalidid home from India, also Surgeon-Captain Baker. Surgeon-Major Poynter has been granted leave from India. Surgeon-Lieutenant Chambers has been transferred to Shorncliffe, Surgeon-Captain Sexton to Dublin, Surgeon-Captain Burrows to Cork and Surgeon-Captain Corkery to the Thames district.

The following gentlemen have, we understand, been appointed Examiners for the British and Indian Medical Services in the several subjects specified:—Dr. W. H. Allchin (Medicine), Mr. Makins (Anatomy and Physiology), Sir W. Mac Cormac (Surgery), and Dr. T. W. Shore (Natural Sciences).

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Joseph Ridge Greenhill, F.R.C.S.Eng., is placed on retired pay (dated Feb. 16th, 1893); Surgeon-Captain Thomas Ricketts Morse retires from the Service, receiving a gratuity (dated March 1st, 1893); Surgeon-Captain Whitley Bland Stokes, M.B., F.R.C.S.I., retires on temporary half-pay on account of ill-health (dated March 1st, 1893).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Stanley Stenton Hoyland, 1st Volunteer Battalion, the Suffolk Regiment, to be Surgeon-Captain, and Surgeon-Captain John Adam, M.D., 1st Volunteer Battalion, the Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's), to be Surgeon-Captain (both dated March 1st, 1893).

INDIA AND THE INDIAN MEDICAL SERVICE.

The following appointments have been made:—Surgeon-Major C. M. Thompson, M.B., to act as Surgeon, Third District, Madras, during the employment of Surgeon-Colonel S. B. Hunt, on other duty. Surgeon-Captain R. Robertson to act as Civil Surgeon and Superintendent of Gaol, Guntur, during the employment of Surgeon-Major R. Pemberton on other duty. Surgeon-Captain F. A. Rogers, Civil Surgeon, to be a Commissioner of the Durbhanga Municipality, vice Surgeon-Captain C. R. M. Green. Surgeon-Major W. H. Thornhill, M.D., to be additional Medical Officer, Ootacamund, from April 1st, 1893. Surgeon-Captain D. Simpson, M.B., to act as Second Surgeon, General Hospital, during the employment of Surgeon-Captain F. J. Crawford, M.D., on other duty. Surgeon-Captain C. Adams, M.B., to act as District Surgeon, Tinnevelly, during the employment of Surgeon-Lieutenant-Colonel H. Hyde on other duty. Surgeon-Captain D. Simpson, M.B., to act as Professor of Pharmacy and Materia Medica, Medical College, during the employment of Surgeon-Captain F. J. Crawford, M.D., on other duty. 19th Regiment Madras Infantry: Surgeon-Lieutenant P. C. Gabbett, I.M.S., to the Officiating Medical Charge of the wing of the regiment at Cuttack. The following postings have been ordered: Surgeon-Major R. O. Cusack, doing duty, Myingyan and Mandalay Districts, to do duty, Belgaum and Bangalore Districts. Surgeon-Major M. F. Macnamara, doing duty, Secunderabad District, to do duty, Myingyan and Mandalay Districts. Surgeon-Captain H. C. Thurston, doing duty, Belgaum and Bangalore Districts, to do duty, Rangoon District. Surgeon-Captain T. C. Moore, on return from leave, to do duty, Madras District. Surgeon-Captain J. O. Pinto, to do duty, Madras District. With effect from Sept. 21st, 1892: Surgeon-Captain L. G. Fischer, Officiating Civil Surgeon, has been appointed Civil Surgeon 2nd class, Grade Station, Bahraich, vice Surgeon-Lieutenant-Colonel C. Cameron, retired, and to continue in Civil Medical Charge of the Mainpuri District. With effect from the date of assuming charge: Surgeon-Captain F. J. Drury, M.B., Bengal Establishment, has been appointed to officiate as a Professor in the Lahore Medical College, during the absence, on leave, on medical certificate, of Surgeon-Captain J. Murray. The services of Surgeon-Captain H. Herbert have been placed at the disposal of his Highness the Thakore Saheb of Morvi for a period of three months. Surgeon-Captain J. B. W. Buchanan, Army Medical Staff, has been transferred from general duty, Poona, to general duty, Bombay District. Surgeon-Major T. H. Sweeny, Civil Surgeon, Mussoorie, has been granted furlough out of India for twelve months, from Feb. 6th, 1893. Surgeon-Major D. Elcum has been granted furlough for one year and seven months, from or after April 5th, 1893. Surgeon-Lieutenant-Colonel E. R. Johnson, Secretary to the Principal Medical Officer, Her Majesty's Forces in India, has been granted leave for ten months. Surgeon-Major W. Conry, M.B., 13th Bengal Lancers, has been granted leave for one year.

NAVAL MEDICAL SERVICE.

The following appointments have been made:—Fleet Surgeon Herbert M. Ellis to the *Victoria* (undated). Staff Surgeons: Michael Fitzgerald to the *Edgar* and George R. D. Charlton to the *Shannon* (both dated March 2nd, 1893); John B. B. Triggs to the *Assistance* (dated March 1st, 1893). Surgeons: Ernest D. Minter and Joseph A. Moon to the *Achilles* (dated March 2nd, 1893) and to the *Victoria* (undated); Francis Woore and Edward B. Townsend to the *Achilles* (undated) and Norman L. Richards to the *Edgar* (dated March 2nd, 1893); Hubert W. A. Burke to the Malta Hospital (dated Feb. 27th, 1893); Basil R. Clarke and John K. Robinson to the *Victoria*, additional (dated March 2nd, 1893); Richard L. Price, M.B., to be lent to Yarmouth Hospital for annual survey of stores (dated March 11th, 1893); William J. K. Barnes to the *Egeria* and D'Arcy Harvey to the *Peacock* (dated March 1st, 1893); Ernest J. Finch to the *Edinburgh* (dated Feb. 28th, 1893); Vidal G. Thorpe to the *Penguin* (undated); Herbert W. G. Downe to the Royal Marine Depôt, Walmer (dated March 13th, 1893); Charles F. Facey to the *Superb* and John N. Bagnall-Oakeley to the *Hibernia* (both dated March 1st, 1893); Frederick J. Burns to Haslar Hospital, Percy V. Jackson to the *Starling*, B. T. Parish to the *Cambridge* and C. S. Bennetts to the *Belleisle* (all dated March 2nd, 1893); and Frederick Fedarb to the *Esk* (undated).

HONOURABLE ARTILLERY COMPANY OF LONDON.

Henry George Read, Gent., to be Surgeon-Lieutenant (dated Feb. 25th, 1893).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Captain W. H. Jalland to be Surgeon-Major (dated Feb. 25th, 1893).—1st (Brecknockshire) Volunteer Battalion, the South Wales Borderers: Surgeon-Captain David Valentine Rees to be Second Lieutenant (dated Feb. 25th, 1893).—1st Volunteer Battalion, the Hampshire Regiment: Surgeon-Major B. N. Earle resigns his commission (dated Feb. 25th, 1893).—1st Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Christopher Vise, M.D., to be Surgeon-Lieutenant (dated Feb. 25th, 1893).—26th Middlesex (Cyclist): Second Lieutenant Reginald Samuel Orme Dudfield, M.B., to be Surgeon-Lieutenant (dated Feb. 25th, 1893).

THE VOLUNTEER OFFICERS' DECORATION.

The following is a further list of those officers upon whom Her Majesty the Queen has conferred the above decoration:—*North-Eastern District.—Rifle:* 2nd Volunteer Battalion, the Lincolnshire Regiment, Surgeon and Honorary Surgeon-Major Edwin Morris, M.D., retired.—*North-Western District.—Royal Engineers:* 1st Cheshire, Surgeon and Honorary Surgeon-Major Charles Hayes Higgins, M.D., retired.—*Rifle:* 3rd Volunteer Battalion, the King's (Liverpool Regiment), Surgeon and Honorary Surgeon-Major George Bretherton Barron, retired; 2nd Volunteer Battalion, the South Staffordshire Regiment, Surgeon-Lieutenant-Colonel James Clark, M.D.; 2nd Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment), Surgeon-Major

(ranking as Lieutenant-Colonel) Robert McNicoll, retired; Surgeon-Major (ranking as Lieutenant-Colonel) Richard A. Gaskell, retired.—*Western District.—Artillery:* 2nd Devonshire (Western Division, Royal Artillery), Surgeon-Lieutenant-Colonel Joseph May and Surgeon and Honorary Surgeon-Major Samuel Nathaniel Elliot, retired.—*Rifle:* 2nd (Prince of Wales's) Volunteer Battalion, the Devonshire Regiment, Surgeon-Lieutenant Michael Leamon, retired.

THE INDIAN MEDICAL SERVICE AND THE CONGRESS AT ROME.

The Indian Medical Service will be represented at the Congress, to be held at Rome in September next, by Dr. P. J. Freyer, Civil Surgeon of Moradabad.

SOLDIERS' RATIONS.

It will be seen from our Parliamentary column that, in reply to the Earl of Strafford's question in the House of Lords to the Under Secretary of State for War, Lord Sandhurst entered very fully—indeed, minutely—into the subject of the system of messing in the army advocated by Colonel Burnett, Assistant Adjutant-General, and Brigade-Surgeon Lieutenant-Colonel Notter. We have already adverted to this system, which has effected a great practical and economical reform in a direction where it was much needed. It has been tried experimentally at Aldershot and other military centres and its success seems to be assured. Under the energetic influence of Sir Evelyn Wood and the intelligence and spirit of Colonel Burnett, one of his assistant adjutant generals, the School of Cookery—Lord Sandhurst states as the result of his personal inspection—has shown that it is really competent for the work for which it was first instituted. It has already undergone great development, and is destined to fulfil a most useful purpose in the army generally—indeed, so impressed was the Director-General of the Army Medical Department with the great value of the system, that he has applied to send an officer and non-commissioned officer of the Medical Staff to the School of Cookery as an experiment, to see whether an improvement cannot be made in the food for army hospital patients. There is no doubt, from all we learn, that the soldier, under this new system, is better fed than he ever was before. The object aimed at is economy in the soldier's messing, with an increased and more varied scale of diet and an improvement in the cooking of his rations; and this seems to have been, in a great measure, attained without any addition being required to be made by the State to the soldier's ration, the cost of which, considering the size of the army, would have involved a very large outlay.

THE ROYAL MILITARY ACADEMY AND THE ROYAL MILITARY COLLEGE.

The report of the Board of Visitors to our two military educational institutions at Woolwich and Sandhurst for the last year has been published, and we note a few points of medical or sanitary interest. The daily percentage of sick amongst the gentlemen cadets at Woolwich was reported to be 1·28; and at the Military College, Sandhurst, the average daily sick-rate was 3·15 out of an average strength of 349·5, giving a daily percentage of 0·9. The state of health of the cadets at both institutions was satisfactory. The medical officer in charge at the Royal Military Academy, Woolwich, reported that during the winter months forty-four cadets were admitted into hospital suffering from bronchitis and sore-throat attributable to the inclemency of the weather and, in some measure, also to chills induced by cold baths in the depth of winter. This is a subject that has been frequently alluded to in reports, and it must be confessed that the bathing arrangements are not satisfactory. The Board of Visitors also refer to the inadequate accommodation afforded by the Cadet Hospital at Woolwich and to its construction, which does not admit of its being re-arranged so as to comply with modern sanitary requirements.

YOUNG SOLDIERS AND ENTERIC FEVER.

Our service contemporary, the *Army and Navy Gazette*, has a long article upon the above subject to which we have frequently called attention in connexion with the European army in India, and quite recently in connexion with the British garrison in Egypt. From our contemporary's point of view, however, it may be said to have been thoroughly threshed out. In India and Egypt the chief predisposing causes are youth and recent arrival; the percentage of liability in the first and second year's service in India is 64·12 as compared with 24·9 in the third and fourth and 8·52 from the seventh to the tenth. It is much the same in Egypt. In the first six years, 1883–1889, when the garrison of Ras-el-Teen at Alexandria consisted of seasoned and partially seasoned troops, there were 26 deaths; in the last three, when this state of things was reversed, the list rose to 43. According to our contemporary, enteric fever in the British army in India is about five times as common now as it used to be, and even after taking account of the difference in diagnosis it is clear that a considerable part of the increase is due to the increased susceptibility on the part of the army owing to youth and to recent arrival in that country. With increased service in India the liability to attack and death from enteric fever rapidly diminishes. Turning to Egypt, we find that at Alexandria the Ras-el-Teen barracks were first occupied by a wing of the Royal West Kent Regiment in 1883 and there were no deaths from typhoid fever during that year and up to August, 1884, when it left. From 1883 to 1888 this post was garrisoned by seasoned regiments which had taken part in the previous military operations in Egypt, and there were only twenty deaths from typhoid fever. But this, after all, does not exhaust the subject, and it only takes account of some of the causes. There must be another factor at work which should be capable of removal or of mitigation by the application of measures of practical hygiene, and the sooner we set about doing this the better.

THE SCIENCE OF DRAINAGE AS APPLIED TO INDIA.

The large cities of India have now had an extensive experience of underground drainage by masonry sewers, and the local papers of that country declare that sanguine advocates of the system can scarcely say that it has proved a success. The ground is too low and generally too flat to admit of sewers being laid in the usual way from the further end of the area to be drained to the nearest municipal sewer. The mud is not carried out with the water in the same way that it is in England, but lies at the bottom of the sewer and has to be moved on by the aid of a scraper. Then there is the high temperature of the sewers in Indian cities, which does not, in Bombay for example, fall below 71° F. in the coldest weather; and, lastly, there is the difficulty attending the English sewer in India that it requires more than half of the total water-supply to carry away the sewage. It is proposed as an alternative to substitute cast-iron pipes for masonry sewers and to propel the sewage by means of steam power instead of depending on gravity for the rate of flow. As the *Times of India* points out, it is a popular belief, and an erroneous one, that the water-supply of a city cannot be too copious. But in India water run to waste into sewers is a useless expense, and if allowed to soak into the surface of uncultivated ground near dwellings it invariably produces conditions prejudicial to health. Municipal corporations are much exercised in their minds at present how to obtain the best and most efficient system of drainage for India, and a proposal recently made by the Municipal Commissioner to the Corporation at Bombay indicates that the systems at present in use in that city are unsatisfactory and cannot be depended on.

Correspondence.

"Audi alteram partem."

"HOMICIDAL STRANGULATION IN THE ADULT WITH EXTENSIVE FRACTURE OF LARYNX."

To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET Dr. Stevenson and Dr. Carling contribute a case of high interest involving a fatal injury of this kind. Its narration is concluded by these words: "Strangulation of an adult is an event of rare occurrence; the homicidal strangulation of an adult is so rare that, in spite of the long experience of one of us as a medical jurist, we have never been able to make a necropsy in a similar case." In THE LANCET for May 2nd, 1869, I placed on record the following: "Homicide by manual strangulation causing fracture of the cricoid cartilage." Here the victim was a woman sixty years of age, and death—I doubt not—was almost instantaneous as no sound was ever heard on her being seized and the injury to the nose was a needless violence. The

question arose at the trial as to a fall or a grasp, but the aspect of the broken cartilage, as may be seen in the woodcut, placed the fall out of question. Further, the evidence given by me as to the burglars, who turned Queen's evidence, confirmed the correctness of this judgment. A fifth person had, it seemed, been an actor in the affair—cautiously described throughout as "the absent man." To this individual's care the old lady had been consigned, he finding her on the cellar steps, where it would appear, to use his own language, he had unintentionally "put the old lady's light out," having seized hold of her "very clumsy" and squeezed her too tight whilst his companions completed the robbery. One of the prisoners was sentenced to fourteen years' penal servitude; whilst the "absent man," the real murderer, escaped and to this day has not been found.—I imagine the authors of the communication in question were not aware of my record.

I am, Sirs, yours faithfully,

OLIVER PEMBERTON.

Temple-row, Birmingham, Feb. 27th, 1893.

ISOLATION *v.* INUNCTION.

To the Editors of THE LANCET.

SIRS,—A report having appeared in certain papers that the Chelmsford Rural Sanitary Authority had decided to erect an Isolation Hospital, I received a communication from Mr. Curgenven, M.R.C.S., Teddington, advocating inunction in lieu of isolation, and stating that "The Enfield Local Board were going to build a hospital eighteen months ago, but they tried inunction by the ..... eucalyptus disinfectant, and have continued it ever since. The Bexley Local Board also gave up the idea of building a hospital last year in favour of inunction, and last week the Hitchin Local Board did the same." Singularly enough, in November last I received a letter from a gentleman at Hitchin directing my attention to two letters which had been published in a local paper. One of them was very similar to that from which I have just quoted, but Chelmsford was one of the places stated to have adopted the method of inunction instead of building a hospital. I replied that so far as my district was concerned there was no foundation for the statement. Upon receipt of Mr. Curgenven's letter I communicated with my friend at Hitchin and with the medical officers of health of the other districts named. Dr. Ridge (Enfield) replied: "We have used eucalyptus, but without evidence of the value said to attach to it. We are proceeding with plans for our permanent hospital." Mr. Sunderland (Bexley) said: "There is no foundation for the statement." Dr. Hayward (Haydock) answered: "There is no ground for saying that the use of this preparation of eucalyptus has been relied on instead of isolation. ..... My board, after repeated recommendations, are at present engaged in making provision for isolation." The reply from Hitchin was: "It is quite incorrect that our local board declined to build an isolation hospital in favour of inunction." Mr. Carter (Chelmsford Urban Sanitary District) said: "The statement made is absolutely without foundation."

Letters such as Mr. Curgenven is writing are calculated to do a considerable amount of mischief if his statements are allowed to pass unchallenged. Medical officers of health have difficulty enough in persuading their authorities to make provision for isolating infectious diseases without encountering opposition from a member of their own profession who allows his zeal in advocating inunction to outrun his discretion. As I have given the special preparation referred to by Mr. Curgenven a prolonged trial, using it freely during several epidemics, I may be allowed to say that it has repeatedly failed to prevent the spread of the infection of scarlet fever.

I am, Sirs, yours truly,

Feb. 28th, 1893. JOHN C. THRESH.

"SYMPHYSIOTOMY."

To the Editors of THE LANCET.

SIRS,—It would certainly be a misfortune, as your correspondent "M.R.C.P." suggests, if the revival of symphysiotomy were to lead to any less attention being paid to simpler methods of delivery, such as turning and the application of the forceps; or if symphysiotomy were to be performed in cases where delivery might be effected by the use of the forceps in skilled hands. "M.R.C.P." cannot intend to suggest that there was any want of skill in the use of the forceps on the part of an expert such as Professor Pinard. It seems to me that the indication for symphysiotomy is to be found not so much in the precise measurements of the pelvis in any particular case, but rather where the forceps has been thoroughly tried unavailingly, and the alternatives of craniotomy or Cæsarean section alone remain. This was the indication in the case in which I performed symphysiotomy on Feb. 12th at the London Hospital. I will not enter into the particulars of the case, as it is not yet complete, except to say that two attempts to deliver by means of the forceps were made under chloroform without success, and that as the head was engaged turning was out of the question. After dividing the symphysis delivery was effected by the forceps very easily and, though the child was for a few minutes in a state of suspended animation, it was rapidly revived by the usual means and is now quite well.

I am, Sirs, yours faithfully,

Wimpole-street, W., Feb. 28th, 1893. ARTHUR H. N. LEWERS.

THE PHENYL-HYDRAZIN TEST.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 18th you give prominence to the fact that Mr. Stillingfleet Johnson demonstrated the phenyl-hydrazin test for sugar before a recent meeting of the Royal Medical and Chirurgical Society, and it is satisfactory to find that the value of this admirable test is vouched for by such competent authorities as Dr. Curnow and Mr. Johnson. It might be inferred, however, that the method was now heard of for the first time in England and even that it was altogether new. But this is by no means the case. The test has for many years enjoyed a high reputation abroad. My friend Professor von Jaksch of Graz, writing more than five years ago, asserted not only that it was a good test but that it was the best—that it was, in fact, the arbiter of the sugar tests and indispensable in every case where it was necessary to discriminate between sugar on the one hand and glycuronic acid, kreatinin and whatever other reducing agents there might be in the urine, on the other. Professor von Jaksch was one of the earliest, the most constant, and decidedly the most authoritative of the panegyrists of phenyl-hydrazin. His book, "Klinische Diagnostik," fully describes the test, and refers to it more than once as by far the most trustworthy and the most adequate for its purpose. This book has found its way into many languages, and amongst others into English three years ago. It has gone through a second edition too, and it is so far probable that it has been read. Within that limit, then, it may be asserted that even in England the test is not new. I think it necessary to mention this because the impression which I would remove is one that might fairly become a reproach in the mouths of our foreign critics, amongst whom THE LANCET has assiduous readers.

I am, Sirs, yours truly,

Wimpole-street, W., Feb. 24th, 1893. JAMES CAGNEY.

"SENSITIVENESS OF THE PERITONEUM."

To the Editors of THE LANCET.

SIRS,—It was surely not worth Mr. Lawson Tait's trouble to write such a letter as that of last week, except with the object of having one last abusive word in the discussion. With regard to the sensitiveness of the peritoneum I am confident that the readers of THE LANCET will estimate my contribution as at least equivalent to some that Mr. Tait thought worthy of publication in its columns. As for my "purely senseless" criticism, Mr. Lawson Tait is too clear-headed a man to have missed the point of my exposure of his inconsistency in his capacity of champion of the anti-vivisectionists. I did not allege that either Mr. Bland Sutton or Dr. Arthur W. Johnstone obtained their material by vivisection, though it is difficult to see the difference between obtaining the tissues from a living animal which is killed before it recovers consciousness and killing the same species of animal suddenly in order to obtain an organ for investigation. Whether the material comes living from the zoological garden or dead from the butcher's shop, it is still material obtained from lower animals, and it was from such material that the inferences were partly drawn upon which "Tait's theory of menstruation" was founded. I, therefore, maintain that the point in my letter regarding the alleged impossibility of drawing inferences from the lower animals to man was abundantly made out; no amount of casuistry will conceal

the inconsistency referred to. There was nothing in my letter to justify the matter of Mr. Tait's reply; the manner one takes for granted. I am, Sirs, yours truly,

Manchester, Feb. 28th, 1893. W. J. SINCLAIR.

*** This correspondence must now cease.—ED. L.

THE HUNTERIAN ORATION.

To the Editors of THE LANCET.

SIRS,—Mr. Bryant, in his interesting oration on Feb. 14th, said, if I did not misunderstand him, that John Hunter, after his fatal seizure at St. George's Hospital, received the attention of his colleagues, was then conveyed to his own house, and died there in the evening. This account of the matter is contrary to the tradition at St. George's Hospital (where an old sofa is still shown on which the great man is said to have died) and is contrary also to the account in Palmer's Life (Hunter's Works, vol. i., p. 131–2), where it is distinctly said that he died in the hospital. I may add that I met at Paris, many years ago, one of the surgical staff of St. George's Hospital in Hunter's days, Mr. Gunning, afterwards body surgeon to Wellington in the Peninsula, who told me that he walked with the little procession conveying Hunter's dead body to his house in Leicester Fields. If Mr. Bryant has fallen into an inaccuracy, however trivial, on so important a matter as the last moments of the great surgeon, he will, I have no doubt, be glad to correct it.

I am, Sirs, yours truly

Great Cumberland-place, March 1st, 1893. T. HOLMES.

ANÆSTHETICS IN OPERATIONS FOR ADENOID GROWTHS.

To the Editors of THE LANCET.

SIRS,—The report in THE LANCET of Feb. 18th of my remarks at the Harveian Society's meeting on Feb. 2nd was necessarily curtailed, and I am afraid that I failed to make quite clear the main reason which induced me to take part in the discussion. What I said, and what apparently I failed to emphasise sufficiently, was to this effect: whatever the position of the patient, whatever the anæsthetic employed, whatever the degree of anæsthesia induced, it was of far greater practical importance, according to my experience, that when once the anæsthesia had been induced as little additional anæsthetic as possible should be given. The presence in the mouth of blood and mucus, instruments, the surgeon's finger &c. lead to gasping and spasmodic respiratory movements on the part of the patient. In the intervals between these gasps not only is elimination retarded, but the heavy chloroform vapour tends to accumulate at the back of the pharynx, and consequently there is always a possibility that with the next inspiration a vapour of dangerous strength may be inhaled. This I believe to be the explanation of those fatal cases referred to by previous speakers, and also of the well-known fact that it is in throat cases especially that we are most likely to meet with collapse after the operation has been finished.

To this I would now like to add that the exact degree of anæsthesia must vary slightly with each patient, partly according to the probable duration of the operation, and partly according to the dexterity of the operator, and can only be determined by long practice. It is now but seldom that I find it necessary myself to give any additional anæsthetic at all after the operation has once commenced, and not only do I seldom, if ever, have any after-trouble, but the patients recover very rapidly and talk coherently within a few minutes of being put back to bed.

I am, Sirs, yours truly,

J. F. W. SILK, M.D. Lond. &c.

Weymouth-street, Portland-place, W.

"BRITISH INSTITUTE OF PREVENTIVE MEDICINE."

To the Editors of THE LANCET.

SIRS,—I have no desire to continue the correspondence on this question in the spirit displayed by Dr. Ruffer. I would only, if you would permit me, refer your readers to the leading article in THE LANCET of Nov. 26th, 1892, on page 1224, and to my own letter in the following week on page 1302, wherein is contained a summary of the views I hold on the subject and which I have seen no reason to change, and therein also lies my answer to Dr. Ruffer. The insinuation that I saw reason to run away from Mr. Victor Horsley is one which I am sure no one who knows me would for a moment accept. I am, Sirs, yours truly,

The Crescent, Birmingham, Feb. 27th, 1893. LAWSON TAIT.

SANITATION IN EGYPT.

(FROM A SPECIAL CORRESPONDENT.)

THE conditions under which human life is maintained in Egypt are in many respects unlike what obtains in any other part of the world, and no attempt at sanitary legislation for the welfare of the inhabitants in general can be successful which is not based on a comprehensive study of the country, the climate, and the manners and customs of the people.

Topography.

The land of Egypt has been aptly compared to a palm tree—a long branchless stem, roots stretching far south into Central Africa, and a feathery tuft of foliage expanded fan-like on the shore of the Mediterranean. It is, in fact, simply a groove worn in the desert by the Nile and made habitable by the waters of that mighty stream. The total length of the Nile is 3370 miles. It drains a country as extensive as Russia, and for the last 1200 miles of its course receives no surface affluent, large or small. The fall from Assouan to Cairo is from two to three inches in a mile, and throughout the Delta this slight slope diminishes to less than one inch.

Density of Population.

The total cultivable area of Egypt is estimated at 11,300 square miles, the larger half constituting the Delta. In this comparatively limited space the aggregation of population is enormous. Officially it is said to amount to 587 souls per square mile, and in reality it is even greater than this, for the uncultivated portions are sparsely occupied by Bedouins, and the last census, taken in 1882 during Arabi's rebellion, most certainly under-estimates the total number of inhabitants. According to this apparently elaborate work, which, however, has been proved to be inaccurate in many particulars, there are 6,592,000 inhabitants classed as sedentary and 225,000 as nomadic; but as a matter of fact the numbers in each case should be far greater. The returns on which the enumeration was founded took no account in many cases of what are called *abadiyehs*, or private estates, which often maintain a population amounting to many hundreds; and in addition to this source of error there is another, based on the well-known fact that the Egyptian looks with suspicion on a census, which he regards as the forerunner of increased taxation and enhanced recruiting. The vast mass of the inhabitants lives in the area actually under cultivation, which does not amount to more than 7800 square miles, so that on the whole the number of dwellers to each square mile may be put down as not far short of 900. This of course represents an excessive degree of overcrowding, and when it is considered that detached abodes are almost unknown, the magnitude of the sanitary problem may be imagined. The extra-urban population congregates almost entirely in villages consisting of clusters of wretched huts, huddled together in the most insanitary manner, with a view of economising space in order to leave as much land as possible for the crops. In the towns, though the architecture is more pretentious, the agglomeration is even greater, owing to the houses being many-storeyed and as a rule insufficiently provided with curtilage. Every effort is made to exclude the sun's rays from dwellings by means which also effectually impede ventilation, and the result may be seen in the half blind and wholly blanched aspect of the citizens.

Chief Sanitary Shortcomings.

Both towns and villages in Egypt are entirely without sewers, the rudely constructed mosque drains being unworthy to be called by that name. In most houses there are cess-pits, situated frequently beneath occupied rooms or in open and exposed places surrounded by filth of every description. Many of these cess-pits are side by side with wells, the subsoil water rising and falling in both simultaneously according to season. In numerous palatial structures in Cairo, Alexandria and other large towns house drainage is carried on through shafts in the thickness

of the wall, leading to horizontal, loose-bottomed culverts amidst the foundations. These shoots, being unlined, are of course not water-tight, and hence the unsightly patches to be seen defacing the rear, and sometimes even the façade, of many a stately pile. The privy accommodation provided is of the most primitive and offensive description, consisting of a slab of stone with a hole in the centre. It is generally situated next the kitchen, or even in the same apartment, with merely a screen between it and the fireplace. In the loftier buildings the roof is frequently used as a latrine, and as the influence of the sun is here more effectual, this method of disposing of excreta is not without its advantages. In the immediate neighbourhood of every village there are always two or more *birkets* or ponds, which at the low Nile season are often perfectly stagnant, but which serve, nevertheless, as sources of domestic water-supply. Most of the inhabitants resort habitually to the margin of these pools for the purposes of nature, in order to have the means at hand for the ablutions prescribed by their religion. Whenever the village is of sufficient importance to support a mosque with a latrine attached to it the men frequent the convenience and use the contents of the *medah* or basin provided for ablutionary purposes. This is a most filthy custom, for the water is seldom renewed, and after washing the frequenters are in the habit of rinsing their mouths and gargling their throats, swallowing during the processes a considerable amount of the contaminated fluid. The drains from the mosque latrines invariably lead to the nearest *birket* or watercourse, and altogether the arrangements in the thousands of these institutions to be found throughout the country are most foul and abominable.

Water-supply.

There is no water in Egypt except what is furnished by the Nile. Even the so-called sulphur springs at Helouan and elsewhere are nothing but subterranean offshoots from the river, which percolate through beds of deposit from which they derive their properties. Were the course of the Nile to be diverted or impeded in its upper reaches, as seems possible, Egypt would perish from drought; the rainfall is incommensurate and there is absolutely no other source of supply. Hitherto the efforts of the Irrigation Department have been exclusively directed towards obtaining a sufficiency of water for the fields, irrespective of its character. Water of any kind suffices to make the crops grow and enables the cultivators to pay their taxes, hence little attention is paid to the quality of what is supplied, and whether or not it may be laden with noxious germs is a matter of supreme indifference. From the point of view of the sanitarian, however, the results are disastrous. The ignorant *fellahin*, finding water at hand all the year round under the new *régime*, neglect the time-honoured custom of storing water in *saharigs* or cisterns at high Nile and trust in the summer to what is provided for them by means of dams and sluices. In an article by Dr. Grant Bey, whose experience of Egypt is second to none, the following remarks occur: "The Nile from the middle of May to the middle of August is little better than an open sewer, and its water at that period, however well filtered, is not potable." This statement, though perfectly correct as far as it goes, requires enlargement. If for May March be substituted, it cannot be further improved upon. It is not surprising that at this time of the year the water of the Nile should deteriorate in quality. The current almost ceases and the filth of millions is cast into its bosom; the bulk of water remains no doubt considerable under these circumstances, but it is not sufficient to ensure purification. Whilst the stream continues to flow with force the pollution does not so much matter from a practical point of view, though at any time it is both wasteful and æsthetically indefensible; but as soon as the current commences to grow feeble the evil effects become apparent, and when stagnation sets in the results are fatal. River water may possibly be as great a self-purifier as the "living earth," but if so it can only be whilst in motion. When stagnant, or nearly so, a body of water—no matter how extensive—which receives putrescible matter in large quantities, and swarming with specific germs, must inevitably become unfit for drinking. Sir Guyer Hunter, in a report presented to Parliament in 1883, stated: "The water at Cairo in July contained living organisms in considerable numbers, and amongst them bacteroid bodies, and had more the character of pond water than that taken from a running stream."

Death in the Nile.

During five consecutive years (1886–90) observations were made on the mortality in twelve of the principal towns of Lower Egypt, the death-rate being noted for two periods of four weeks each, ending respectively the middle of April and the first third of August. In ten of these towns the average increase in the number of deaths during the second period as compared with the first amounted to 53 per cent., the figures ranging from 12 each at Guiseh and Zagazig to 134 at Chibin. In the remaining two towns there was a decrease of 12 per cent. The two healthy towns were Damietta and Rosetta; the only difference between them and the others lay in the water-supply. Owing to the proximity of the sea the inhabitants could not use the river water during the low Nile season in consequence of its saltness and were therefore forced to store up a supply in their *saharigs* during flood time. In every other respect there was an exact similarity between these two towns and the other ten, all being equally insanitary. The inference to be deduced from these striking facts is sufficiently plain, but there is yet even stronger evidence. In 1891, a new canal having been dug, the *saharigs* at Rosetta were allowed to stand empty. Mark the consequence. As the summer drew on the mortality rose in a manner that was positively startling; the deaths soon exceeded the births—a state of things never known to have occurred before at this time of the year—and, in short, the hitherto healthy town became one of the worst in the whole twelve. At Damietta the *saharigs* were filled as usual and the mortality remained stationary. It would be impossible to find a clearer example of cause and effect. Were it otherwise doubtful, the deadly influence of low Nile water would thereby be amply established.

Enteric Fever.

As regards the special poison that is the immediate cause of the low Nile mortality it is possible only to offer a suggestion. Enteric fever is commonly supposed to be rare amongst Egyptians, but whether this supposition is well founded or not is an open question. At Kasr-el-Aini Hospital there had not been in 1891 a single case under treatment for seven years, and Mr. Milton had only seen the disease once in a native since his arrival in Egypt. Enteric fever has never been recognised during life amongst the Cairo foundlings, of whom 30·6 per cent. died in 1890; but in some necropsies that were made there was found very distinct infiltration of Peyer's patches. During the low Nile season the vast majority of the deaths amongst children is ascribed in the official returns to *gastrite, gastro-entérite* and *diarrhée*. It is possible that amongst these cases there may be some of typhoid fever, and observers have gone so far as to assert that all native children pass through the disease in their infancy, thus becoming, as it were, protected. That the poison of enteric fever exists in the country is clearly proved by the immense prevalence of the affection amongst the soldiers of the army of occupation. A great authority has said: "There is no doubt whatever that whenever excrement is mixed with water we are in danger of typhoid." The Nile in summer always contains tons of excrement.

General Observations.

The climate of Egypt is happily one of the best in the world, and if means of counteracting the pollution of earth, air, and especially water, caused by the uncleanly habits of the population, foreign and indigenous, be afforded, the country will soon be second to none as regards salubrity. International intrigue and jealousy must, however, be guarded against. If these agencies are allowed to prevail, as in the past, sanitary improvement must inevitably come to a deadlock, and the little good that has been effected will crumble away, leaving no trace behind. The first step towards improving the sanitary condition of Egypt must be the abrogation of the capitulations; the next must be to make the people themselves realise the fact that improvements have to be carried out speedily and that they must find the money. Hitherto they have been treated as children, and the habit of self-help has not been cultivated. If the people could be made to see the advantage of local improvement money could be found, but it will require the expenditure of a large sum before the accumulated sanitary evils of centuries and the habits of scores of generations can be set right. Egypt as regards sanitation is now about on a level with what England was in the days of Queen Elizabeth, when the mortality of London was 45 per 1000. There were sanitary reformers in those days, but they did not live to see the fruit of their labours. Shall we be more fortunate? Rehabilitation of finance is probably a praiseworthy object, but it is not the only duty which England owes to Egypt. In 1882, after the defeat of Arabi, she assumed the temporary

protectorate of the country, and at the present time, after an occupation of over ten years, British troops are by their presence still influencing and guiding the destiny of that ancient land. On England is therefore thrown the burden of a great responsibility, for, it is certainly her duty to protect the people by the introduction of sanitary reform. Her position as the leading sanitary nation of the world renders this obligation imperative. *Noblesse oblige*, though a French phrase, is a British sentiment, and our rulers, if they wish to stand well with posterity, should lose no time in acting up to it. Let those who have the power remember that money is not everything; that on them devolves a higher and a nobler duty than mere tax gathering—*Salus populi suprema lex.*

Synopsis of Sanitary Requirements.

In brief, the great sanitary needs of Egypt may be summed up in a few sentences: (1) An improved water-supply, with means of flushing *birkets* and other receptacles for storage during the low Nile season; (2) a system of conservancy for villages by means of which all human excreta will be restored to the fields; (3) ventilation of streets and lanes in the towns and larger villages; (4) improvement of *echeches* or hovels inhabited by the poorer classes, which at present are unfit to shelter cattle; (5) sewerage of the principal towns in connexion with sewage farms, for which unrivalled facilities exist; (6) improvement in the present system of disposal of the dead. This list is of course by no means exhaustive, but it indicates the lines on which sanitary legislation should be founded.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Surgical Aid Society.

ON Thursday, Feb. 23rd, a meeting was held in the Town Hall with the object of establishing a local branch of this Society. Dr. Phene and Mr. J. Watson were present as representatives of the parent society, the former explaining that the object of the movement was to supply surgical appliances to persons, after surgical operations, who were unable to provide them for themselves. Professor Thomas Jones, F.R.C.S., proposed a resolution—which was subsequently carried—welcoming the proposal to form a branch of the Society in Manchester and expressing the belief that it would be of great benefit to the suffering poor and would prove a useful auxiliary to the existing hospitals and dispensaries. Professor Jones said that many poor patients who were operated upon at the Royal Infirmary and lost a limb had the greatest difficulty in providing themselves with suitable appliances. Dr. Harris, physician to the Infirmary, whilst cordially welcoming the inauguration of a branch of the Society in Manchester under reasonable safeguards, was of opinion that great care should be taken to ensure that applicants for surgical instruments should be really in need of such assistance. The system of giving help to all comers simply on the letter of a subscriber was radically bad. It was equivalent to the "recommend" system which had been done away with in connexion with the Manchester hospitals. In his opinion every case ought to be inquired into by a special officer, such as those employed by the Charity Organisation Society, who would take care that none but really deserving persons were admitted to the benefits of the Society. Unless some such safeguard as this were adopted it would be found that the man who could tell the most plausible tale would obtain relief, whilst the really needy persons who could not do so would have to go uncared for. An influential committee was at once formed with the object of making the requisite arrangements for the establishment of a branch of the Society in Manchester at an early date.

Stretford Local Board and Insanitary Property.

An inquiry was held last week at the Stretford local board offices by Major-General Crozier of the Local Government Board with respect to a proposed improvement scheme by the Stretford sanitary authority, under the Housing of the Working Classes Act of 1890. The area proposed to be dealt with under the scheme consists of forty-three houses grouped together around two courts known respectively as Diamond-court and Pearson's-court. The houses were old, dilapidated and ill-drained. Mr. Hislop, medical officer of health for the board, stated that the bad arrangement of the houses within the area and the want of light, air and ventilation were injurious to the inhabitants, 183 in number, and that the evils connected with the houses could not be remedied otherwise than by an improvement scheme for the reconstruction of the houses within the area. The local board have provided in their scheme for the erection of proper dwellings for the people who will be removed from the condemned area. They have selected a site near the latter which is considerably larger than it and which will lend itself admirably to the provision of a sufficient number of working-class dwellings to accommodate the whole of the population displaced under the scheme. After the close of the formal inquiry Major-General Crozier inspected the condemned area and also the site proposed for the accommodation of the displaced tenants, and the result of his report to the Local Government Board will doubtless be communicated to the Stretford authorities in due course.

The Small-pox Epidemic.

Although no fresh outburst of small-pox has been reported in the city since my last letter, nevertheless the number of the cases reported and their distribution over the city area continue to be matter of serious concern to the authorities. According to the published returns the reported attacks last week numbered thirty, as compared with twenty in the week immediately preceding. Many of the cases admitted recently are of a very severe type, two unvaccinated persons having died in hospital during last week of confluent and one unvaccinated person of hæmorrhagic small-pox. The disease is reported to be still spreading in Salford, Oldham and other towns in the immediate neighbourhood, and fresh cases are constantly being imported from elsewhere into the tramp wards and lodging-houses of the city. The temporary convalescent home at Clayton Vale is doing good work, and is providing constant accommodation for overflow cases from Monsall to the number of about fifty. The new sheds at Monsall Hospital are now approaching completion. When finished they will afford accommodation for about 100 beds, and arrangements are in progress for the complete isolation of the small-pox hospital, together with its administrative department, from that portion of the Monsall committee's establishment which is devoted to the isolation of febrile infectious diseases other than small-pox.

Unhealthy Area (No. 1), Ancoats.

At last one of the blocks of unhealthy property, forming about half of the condemned area in Oldham-road, has been razed to the ground, and the corporation are now engaged in the necessary preliminaries for erecting one of the projected blocks of labourers' dwellings on the site. It will be some months before any adequate idea can be formed as to the suitability of this pioneer block for the purpose for which it is intended. As far, however, as can be gathered from a superficial examination of the foundations and of such of the walls as have hitherto been commenced there seems to be every hope that the block will be well and substantially built. It is doubtful whether this building will be completed by Midsummer Day, but the contractors seem hopeful that such will be the case.

February 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Death of Sir Andrew B. Walker, Bart.

THE news of the death of Sir A. B. Walker, Bart., though expected by the serious reports which had for some time past been circulated as to his health, was received with much sorrow by all classes in this city. Though not a native of it, the deceased had resided in or near it from an early age and was favourably known for his modest demeanour, which never left him even after he had received the highest honours his city could give, followed first by the order of knighthood and then by a baronetcy. He was also distinguished for his munificent contributions to all charitable objects, and was a generous donor to the Liverpool University College and a liberal subscriber to all the medical charities. He has left an excellent example to other citizens, for often it has happened that, after acquiring large fortunes in Liverpool, they leave it for other scenes. Sir Andrew Walker died at his residence at Gateacre, within a short distance of the city where he both made his wealth and spent large portions of it in graceful benefactions.

Football Players and the Hospitals.

The handsome contributions of £208 to the Stanley Hospital and of £104 to the Royal Infirmary have been given by the Everton Football Club as the proceeds (after paying all expenses) of the Theatrical Football Match held on Feb. 2nd.

February 28th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Newcastle.

IN reference to exaggerated reports in circulation as to small-pox in Newcastle, the medical officer of health says that in the city of Newcastle there have been in all eight cases since Dec. 12th, 1892, and that there is no further likelihood of the occurrence of any further cases unless by a fresh importation of infection into the city.

Gateshead Children's Hospital.

The annual meeting of the Gateshead Children's Hospital has been held, and the report showed that there had been 68 in-patients and nearly 1000 out-patients during the year. Dr. Blacklock strongly condemned the selfishness of people who visited the hospital when the epidemic of whooping-cough was rife outside and so introduced the disease into the hospital. The financial condition of the hospital for so young an institution was fairly satisfactory and the year closed with a balance in hand of more than £100.

Typhoid Fever at Chester-le-Street.

An outbreak of typhoid fever is reported at Chester-le-Street. This ancient town, once a city, is situated between Gateshead and Durham. The medical officer of health reports the outbreak as a very serious one.

The Growth of West Hartlepool.

The Health Committee of the West Hartlepool Council has ordered the returns of the medical officer for the future to be based on an estimated population of 44,000. The population of the town has thus increased since its commencement as nearly as possible at the rate of 1000 a year. This is said to be an increase that in ratio is unexampled in South Durham.

The Health of Weardale Lead Miners.

Dr. Wm. Robinson's (Stanhope) report of the condition of lead miners in Weardale is instructive and interesting. As to phthisis, he attributes the excess of this disease in Weardale to occur principally in lead miners owing to the bad ventilation of mines and the insanitary conditions of mine shops. The mine shop is a temporary lodging-house provided by the companies, and is said to be so overcrowded that the stench from overcrowding and bad ventilation after the miners have retired to rest is deplorable. The men frequently suffer from catarrh, bronchitis, pleurisy &c. Dr. Robinson's report will well repay perusal by all interested in the diseases of occupations.

Newcastle-on-Tyne, March 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Leith and the Board of Supervision.

As I mentioned at the time, the Board of Supervision ordered Leith to make a house-to-house visitation of the burgh, especially of certain properties in it which were particularly referred to. The reply of the Leith local authority was not satisfactory and was not generally regarded as deferential. The result was that the board again wrote asking when the visitation was made, what report was submitted by the inspector, what orders were given, and how far the orders had been carried out; and the board further wished a copy of the report. The town clerk has sent copies of minutes of the Public Health Committee, which showed that the burgh surveyor had from time to time reported on the sanitary condition of the properties in question, that 750 notices had been issued to owners to supply the necessary conveniences to their houses, and that these notices were accompanied by circulars to the effect that, whilst they were issued in view of the letting season, the town council would not themselves execute the works on failure of the owners to do so till after the ensuing May term, and no report has yet been made as to how far the works ordered have been carried out.

Lochmaben and its Water Supply.

The Court of Session has disposed of a petition and complaint by the Board of Supervision asking the Court to ordain the local health authority of Lochmaben to bring in a water supply and execute a drainage scheme. As no answers were given by the local authority the Court assumed that they had none to give, and as there was a *primâ facie* case for the interference of the Court the latter pronounced that there had been a neglect of duty and ordered a local engineer to examine and report.

The Portobello Fever Hospital Case.

Reference was made some time ago to an action which was raised against the provost of Portobello and others claiming damages to the extent of £500 for alleged injury received by a child suffering from scarlet fever who had been for some weeks in the Portobello New Hospital. The judges of the Court of Session have unanimously declared against the complainers in the case, and not only acquit the provost of all blame, but consider that his conduct was public-spirited and kindly. They consider the action one which should not have been raised.

February 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Health of Dublin during January.

THE general and zymotic death-rates were below the average, although the temperature during part of the month was unusually low. During the previous month and part of January numerous cases of typhoid fever occurred in Henrietta-, Upper and Lower Dominick-, and Bolton-streets. Sir Charles Cameron inspected many of the houses in these streets and found in several a very defective condition of the drainage and sanitary arrangements. A careful inspection was made of the sewers in these streets, with the result that of sixty-four houses in Lower Dominick-street thirty-nine were found to be provided with pipe drains and twenty-five with rubble masonry ones, with flat bottoms worn or loosely covered with flags; and in the other streets similar defective drains were found. The soil of this locality has become saturated with sewage, which has leaked from the defective drains. Sir Charles Cameron has already given strong proofs that in Dublin, at least, typhoid fever is a miasmatic disease, and that, under certain conditions of the soil, its germs issue therefrom and infect the air. It is, therefore, not alone the persons whose house drains are defective who are subject to typhoid infection; the whole of the residents in a soil-infected district are also exposed to this danger. During the month there were six deaths from diphtheria, which is the highest number of fatal cases from the disease ever recorded in Dublin in one month.

Simultaneous Ligature of the Innominate and Carotid Arteries.

Mr. Coppinger's case of subclavian aneurysm, in which the innominate and carotid arteries had been ligatured forty-six days before, was exhibited as a "living specimen" at a well-attended meeting of the Royal Academy of Medicine on Friday evening, and caused much interest as being the first case of recovery after occlusion of the innominate by ligature as yet shown in Europe. By special request of the President a short account of the patient was given, the operator stating that the case would be reported in full and brought forward for discussion by the profession at a future date.

Cork Fever Hospital.

The receipts from all sources amounted to £1372 3*s.* 5*d.*, and the expenditure reached £1911 16*s.* 9*d.*, the balance to debit at the close of the past year being £359 13*s.* 3*d.* The expenditure, however, includes a sum of £428 7*s.* due by the hospital from the previous account. The admissions numbered 242, or an increase of 82 over the previous year, the largest recorded since 1866. There were 82 cases of typhus fever, 53 of typhoid fever, and 43 of simple continued fever. The typhoid fever death-rate was 7·27 per cent., and the typhus fever 9·75 per cent.; but, deducting four cases which were received in a hopeless condition, the mortality was only 4·87 per cent.

The Royal University of Ireland.

At a meeting of the Senate of the Royal University of Ireland, held on Feb. 10th, Dr. Byers was reappointed Examiner in Midwifery, and Dr. Whitla in Materia Medica.

The late Henry Burden, M.A., M.D.Q.U.I.

I have to announce with sincere regret the death of Dr. Henry Burden of Belfast, which took place on Saturday, Feb. 19th, at Abingdon Villas, Kensington, London, where, since last September, he had been living in great suffering from malignant disease of the throat. The disease had appeared some time before he went to London to consult and be near his brother-in-law Sir Wm. MacCormac. Dr. Burden was the son of Dr. Wm. Burden, who in 1849 was appointed the first Professor of Midwifery in Queen's College, Belfast, a post which he held until his resignation in 1867. His son Henry Burden was educated at the Royal Academical Institution, Belfast, and at Queen's College. He had a very distinguished career, being a graduate in arts and in medicine. He was senior scholar in natural science and also in anatomy and physiology, and in 1859 he obtained with his B.A. degree the gold medal and first-class honours. He became M.D. in the Queen's University in 1860 and M.A. in 1861. He was a member of the Royal College of Surgeons of England and he held the diploma in State Medicine in the Irish College of Physicians. Dr. Burden held many appointments at different times. He was for a period Demonstrator of Anatomy at Queen's College, Assistant Physician to the local Lying-in Hospital and Pathologist to the Belfast Royal Hospital, an office which, owing to ill-health, he resigned about eighteen months ago. Dr. Burden had been president of the Ulster Medical Society and of the Belfast Literary Society. For a considerable period he was secretary of the Belfast branch of the Royal Medical Benevolent Fund Society of Ireland. He was also a member of the Royal Irish Academy, was a man of considerable literary and scientific attainments and of the most amiable and kindly disposition, and was most popular with the members of his own profession. He married a daughter of the late Dr. Henry MacCormac of Belfast, and he had a family of four sons and five daughters; one of the former is a house-surgeon at St. Thomas's Hospital. Dr. Burden was at the time of his decease fifty-eight years of age.

February 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Professor Le Dentu on the Surgical Treatment of Aneurysm of the Innominate Artery.

PROLONGED rest, low diet and the exhibition of potassium iodide, with or without repeated venesections, have sufficed to bring about the cure of the above disease, together with that of its frequent companion, aneurysmal dilatation of the aortic arch. In most instances, however, operative measures are necessary. Of these, simultaneous ligature of the right carotid and subclavian has yielded the most encouraging results. Few modern surgeons would, I imagine, be in favour of tying only one of the branches of the diseased vessel, or of the ligation of both, with an interval more or less prolonged between the two operations. Professor Le Dentu's communication (Académie de Médecine, Feb. 21st) has reference only to the operation of the synchronous double ligature, and I deem his conclusions sufficiently important to merit a place in the columns of THE LANCET. Already in October, 1891, this same surgeon reported to the Société de Chirurgie a case of the kind thus treated. Although the operation itself was well borne, the already enormous aneurysmal pouch continued to increase in size, and death supervened on the forty-fourth day. Since then he has once more repeated the operation. Considerable relief was conferred by it, and for the space of three or four months the patient considered herself cured. Disquieting symptoms then reappeared and examination revealed a development of the aneurysm towards the left side, especially in the direction of the left subclavian. Intending to tie the left subclavian, M. Le Dentu tied a large trunk in the axilla, which he subsequently found to be an abnormally developed posterior scapular artery. The same relief, but of shorter duration, followed this operation. The tumour, however, extended further, and the condition became so serious that the patient succumbed before ligature of the left carotid could be practised. The necropsy brought to light a pouch involving not only the brachio-cephalic trunk and the arch of the aorta but a certain length of the descending aorta. M. Le Dentu formulates the following rules of treatment:—In aneurysm of the innominate artery begin with the simultaneous ligature of the right common carotid and subclavian arteries. Should the tumour, after a pause, continue to develop in the direction of the supra-clavicular and supra-sternal fossæ, without, however, reaching to the level of the sixth cervical vertebra, ligature of the vertebral artery of the same side would be a justifiable procedure in some cases. Should the tumour, after having ceased to develop on the right side, tend to spread towards the left supra-clavicular fossa, ligature of the left subclavian should be performed. Ligature of the left common carotid is to be avoided unless several months have elapsed since the tying of the right carotid. In primary or secondary aneurysm of the aorta, if the ascending portion of the arch be involved, tie the two branches of the innominate. When the pouch occupies the arch proper, with or without the innominate trunk, there may be advantage in tying a large vessel on the left side at the same time as one of the branches of the innominate, on the condition, however, that the two common carotids be not ligated on the same day. Primary aneurysm of the descending or third portion of the arch contraindicates the tying of any artery, the only effect of any such intervention being the increase of the tension of the sac-contents. Ligature of the branches might still relieve a patient suffering from an aneurysm involving the whole of the ascending aorta and the innominate, the second case related above bearing out this view. M. Le Dentu sums up by recommending in all such cases a first trial of strictly medical treatment, and he concludes by warning against undue dread of surgical interference, which, thanks to the employment of aseptic ligatures, is now shorn of the dangers incurred in former years.

M. Lancereaux on the Treatment of Delirium Tremens.

It has been said by some experienced clinician that the bane of prescribers is timidity. It accordingly does one good to come in contact with a robust mind, such as that of the well-known physician of the Hôtel Dieu, whose simple and straightforward therapeutical methods are refreshing to contemplate in these days of complicated drugging. A man is a prey to alcoholic delirium; give him sleep and his life will probably be saved. A trivial dose of potassium bromide is of no use to him, and the same may be said of chloral. M. Lancereaux tells us that since 1873 the following treatment has been followed by him with unvarying success—viz., isolation in a perfectly still, dark room, padded if necessary, but no straitwaistcoat to be worn; exhibition of from one to one and a half drachms of chloral hydrate, with half a grain of hydrochlorate of morphine in an infusion of limes as a vehicle. If in ten minutes sleep be not procured, he administers an injection of one-sixth or one-third of a grain of morphine—the patient not to be left until he sleeps, further recourse being had to the chloral draught if necessary. Watch the patient, and when all agitation has ceased give strychnine or nux vomica, or, if the stomach be disordered, bicarbonate of sodium, with hydrotherapy later on. The only objection to be legitimately advanced against the above treatment is the danger of such large doses of chloral in the case of weak heart. But in young and vigorous alcoholics M. Lancereaux's formula may be fearlessly employed.

Another Medical Victim.

A young student died recently after a few days' illness of diphtheria contracted in the wards of Dr. Troisier at the Lariboisière Hospital. The sad event has cast quite a gloom over the *jeunesse de la Faculté*. The funeral ceremony (conducted in the picturesque Church of St. Étienne du Mont in the Place du Panthéon) took place on Thursday last in the presence of a vast assembly of friends and comrades. Funeral orations were delivered by M. Vorbe in the name of the City of Paris, M. Poirier for the Faculty of Medicine and M. Tissier for the Students' Association. The expenses of the funeral were defrayed by the city, a special vote having been unanimously made by the Municipal Council.

February 28th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The German Society for Public Hygiene.

THE eighteenth assembly of the German Society for Public Hygiene will sit at Würzburg on May 25th, 26th, 27th and 28th, and will discuss the different treatment of building regulations in the inner parts, the outer parts and the

environs of cities, reforms in the baking of bread, the principles of nutrition and how to induce the poor to comply with them, measures for preventing waste of water &c.

Photographs of the Bladder.

At the meeting of the Berlin Medical Society last Wednesday the private lecturer, Dr. Nitze, showed photographs of parts of the human bladder in health and disease, taken with the aid of the cystoscope.

Courses of Instruction on Cholera.

The German Office of Health is making preparations for courses of instruction on cholera for practitioners. The Bavarian Government has ordered similar courses in the Hygienic Institutes at Würzburg and Munich after the beginning of the university holidays.

The Chair of Anatomy in Strasburg.

The Professorship of Anatomy in the University of Strasburg, vacant by the death of Professor Joeffel, has been offered to Professor Ppitzner.

February 26th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

A National Sanatorium.

A PROPOSITION has been made in the United States Senate to appoint a commission to locate a national sanatorium for the treatment of pulmonary diseases. This sanatorium must be located in one of the territories of the United States and upon unoccupied public lands, and the commission is to report within six months. Of course such a measure has no possible chance of serious consideration.

Hospitals for Epileptics.

But little effort has been made in this country to provide special care for epileptics. These are found in almshouses, in insane asylums and in institutions for the feeble-minded. There is now a movement in favour of giving them the advantages of hospitals organised for their proper treatment, and the subject is under immediate discussion in several States.

A National Quarantine.

The "cholera scare" of last autumn has made quarantine one of the topics in Congressional circles this session. The principal question at issue is the creation of a national system. The popular feeling is now most decidedly in favour of a uniform quarantine law and the administration of the law by the general Government. It is very doubtful if this measure will pass, owing to the opposition of the States and municipalities which now exercise quarantine jurisdiction.

Removal of the Ovaries as a Therapeutic Measure in Public Institutions for the Insane.

The State Board of Charities of Pennsylvania has recently taken action in the case of the operation of oöphorectomy at the Norristown Hospital for the Insane. It appears that on visitation to that institution four women were found in a separate annex ward who were just rallying from the operation of removal of the ovaries, and it was intimated that fifty other cases had already been marked for the operation. This method of treatment was recommended by the medical superintendent and approved by the trustees, who had set apart a separate building for such purpose. The Lunacy Committee of the Board state in their report that the ovaries of insane women sometimes present such gross forms of disease as to absolutely demand extirpation. In those cases where gross lesions exist or where life is obviously in danger the operation is justifiable; but where the mental disorder only appears to be more or less influenced by the generative apparatus, the committee condemn the operation. As to the practice of such operations in State hospitals, there was grave doubt whether a relative or guardian of an insane woman had the moral or legal right to give consent to the unsexing of the insane person, whose power to give consent was temporarily or permanently in abeyance.

Personal Rights of the Insane.

The question as to the personal rights of the insane has been discussed by the legal member of the above committee. He is of the opinion that the operation of oöphorectomy as practised in the State hospitals, unless necessary to save life, is not only illegal but, in view of its experimental character, not excusable on any reasonable ground. A lunatic cannot give a legal consent to the performance of an experimental operation, nor can the relatives legally give such consent, and therefore a surgeon practising oöphorectomy upon an insane woman, unless to save life, takes a great risk.

February 6th.

MEDICAL TRIAL.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON *v.* THE GENERAL MEDICAL COUNCIL.

THIS action came on for hearing on Wednesday and Thursday last before Lord Justice Smith, sitting as a Judge of First Instance in the Chancery Division of the High Court of Justice.

The question at issue is the right of the plaintiff party—formally designated in the cause as the "President and College or Commonalty of the Faculty of Physic in London"—acting alone, to grant a diploma in respect of Medicine and Surgery conferring the right to registration under the Medical Acts. The formal claim of relief is therefore to have "a declaration that the plaintiffs were at the passing of the Medical Act, 1886, a Medical Corporation legally qualified to grant diplomas conferring the right of registration under the Medical Acts then in force in respect of Medicine and Surgery, and that the plaintiffs have always been and now are entitled independently and without acting in combination with any other Medical Corporation or body to hold such qualifying examinations in Medicine, Surgery and Midwifery as in the Medical Act, 1886, mentioned, and to confer by their single diplomas on their members and licentiates who have passed such qualifying examination the right of registration under the Medical Acts now in force," and "an injunction to restrain the defendants from publishing any new edition of the Medical Register containing any table or list of bodies capable by their licence of admitting primarily to the Register without entering in such table or list the name of the plaintiffs as a body who are capable singly of granting such licence."

The history of the transactions which have led up to the present proceedings is shortly as follows:—Prior to the year 1883 the Royal College of Physicians granted its diploma upon an examination comprising medicine, surgery and midwifery. In that year the arrangement was made with the Royal College of Surgeons by which a conjoint examination was substituted for the independent examinations previously conducted by the two colleges separately. The Conjoint Scheme, however, did not include candidates who commenced their medical studies prior to Oct. 1st, 1884, and for their convenience separate examinations have since that date been held by the Royal College of Physicians upon the original footing and diplomas granted by its sole authority. Such diplomas were up to Nov. 27th, 1891, recognised by the General Medical Council as conferring the right to registration, but on that date a resolution was taken which induced the Royal College of Physicians to move in the direction of the present proceedings. The resolution, however, was based upon a communication to explain which it is necessary to go back a step in the narrative. The annual volume of the Medical Register contains, as most of our readers are aware, a list referred to in the prayer quoted above and commonly known as Table G, containing the names of the various bodies having power to confer a complete qualification in medicine, surgery and midwifery. This table prior to 1888 contained the name of the Royal College of Physicians as a separate qualifying body, but in the issue for that and subsequent years the names of the two Royal Colleges (Physicians and Surgeons) have appeared in combination as conferring a qualification jointly but not apart. When this was observed the Royal College of Physicians requested the General Medical Council to amend the list and restore the name of the College as that of an independently qualifying body. To this request the Council responded by a resolution in the following terms:

"That as the claim made by the Royal College of Physicians of London that its single diploma of Licentiate or Member should admit to the Medical Register without any additional qualification would involve the admission by the Council that the College can itself confer a complete qualification in medicine, surgery and midwifery, and as this claim is based

upon the interpretation of the charter of the College along with the Medical Acts of 1858, 1860 and 1886, the Council leave it to the Royal College of Physicians to substantiate their claim in such way as they may think fit, and in the meantime instruct the Registrar not to register the qualifications of Licentiate or Member of the Royal College of Physicians of London as in themselves sufficient to admit to the Register."

It will thus be seen that the questions discussed were purely points of law. Incidentally it transpired that there are—or rather there were at the end of 1891—students to the number of 1169 on the books of the Royal College of Physicians who commenced their medical studies before Oct. 1st, 1884—the date at which the compulsory provisions respecting the conjoint examination came into force. At the hearing of the case formal evidence only was given, and that by Dr. Edward Liveing, the registrar of the Royal College, there being of course no real dispute as to the facts of the case. At the conclusion of the argument Lord Justice Smith intimated that he would reserve his judgment and prepare it in a written form.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed an Examination in the subjects indicated below:—

Surgery.—**A. K. A. Cœsar and A. E. Kennedy, London Hospital; R. Herd, Cambridge and Manchester; W. E. S. Jones, Guy's Hospital; J. Mostertz, University College; E. S. Perkins, Yorkshire College, Leeds; J. W. Roberts, Liverpool; A. W. Taylor, London Hospital; W. Turner, King's College.**

Medicine, Forensic Medicine and Midwifery.—**J. Garrett, St. Mary's Hospital; J. Mostertz, University College.**

Medicine and Forensic Medicine.—**L. J. G. Carré, St. George's Hospital.**

Medicine and Midwifery.—**F. L. Underwood, University College.**

Medicine.—**S. P. Hopewell and A. W. Taylor, London Hospital; P. T. Naden, Queen's College, Birmingham; J. W. Roberts, Liverpool; J. Wood, St. Thomas's Hospital.**

Forensic Medicine and Midwifery.—**R. L. Chapple, Yorkshire College, Leeds.**

Forensic Medicine.—**G. A. Peake, Bristol.**

Midwifery.—**B. E. Church, St. Bartholomew's Hospital; A. B Franey, St. Mary's Hospital; F. W. Kerbey, London Hospital; E. H. Worth, St. Thomas's Hospital.**

The diploma of the Society, entitling the candidates to practise Medicine, Surgery, and Midwifery, has been granted to the following gentlemen:—

Messrs. Cœsar, Garrett, Herd, Hopewell, W. E. S. Jones, Mostertz, Naden, Peake and Roberts.

PRESENTATION.—SOUTH AUSTRALIA.—Mr. E. C. Stirling, M.D.Cantab., F.R.C.S.Eng., of Adelaide, has received, through the Consul-General for the Netherlands, from Her Majesty the Queen Dowager of the Netherlands a massive gold medal for science and art, as a token of appreciation of the interest he had taken in the Netherlands Scientific Collection by his donation to the Museum for Natural History at Leyden.

ATTORNEY-GENERAL *v.* CORPORATION OF MANCHESTER.—The case of the Attorney-General *v.* the Corporation of Manchester, which is a revived attempt on the part of the residents of Withington to prevent the establishment in their midst of a small-pox hospital for the relief of Manchester, came before Mr. Justice Chitty on Thursday last upon a motion for an interim injunction to restrain the use for this purpose of the property acquired by the Corporation of Manchester within the Withington district pending the trial of the action. The application was dismissed, the costs being made costs in the cause.

LIFE AND THE PHYSICAL FORCES.—On Monday, at the Victoria Institute, Mr. J. W. Slater, F.C.S., introduced this subject. He traced the difference between life and the physical forces and reviewed the experiments and arguments which had been thought by some to show that the knowledge of the origin of life had now been obtained. The topic excited great interest, and contributions to its discussion were supplied by Sir G. Stokes, Professor Lionel Beale and other eminent scientists. Sir G. Stokes favoured the view that the origin of life must be referred to the Supreme Being. Professor Beale thought that an absolute line must be drawn between the living and the non-living. Professor Bernard of Dublin said that all evidence went to show that vital forces are not comparable with any other form of energy. Dr. Schofield referred to Mr. Huxley's dictum that "Life existed before organism and is its cause."

THE Lord Chancellor has appointed Mr. George R. Cundell, M.R.C.S. Eng., L.S.A., of Kew, justice of the peace for Richmond, Surrey.

TASMANIA.—His Excellency the Governor of Tasmania, on Dec. 21st last, assented to an Act to provide for the establishment of hospitals for inebriates.

JEAN SERVAIS STAS.—A movement has been set on foot to perpetuate the memory of a great chemist and a great man—Jean Servais Stas—by the publication in a convenient form of his valuable works, and by the erection of a suitable monument. The researches of Stas in chemistry have called forth the admiration of his fellow workers in all civilised countries; his services to the State have deserved the gratitude of his compatriots; whilst his many excellencies as a man are calculated to raise the tone of humanity. The committee contains many well-known names, such as those of Lord Kelvin, Tyndall, Helmholtz, Du Bois Reymond, Brialmont and Fresenius. Subscriptions in support of this worthy object may be sent to M. L. Errera, 1, Place Stéphanie, Brussels.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the quarterly meeting of this Society to be held at the Medical Institution, Liverpool, on March 9th, the following papers will be read:—By Dr. Wiglesworth, "General Paralysis occurring about the period of Puberty;" by Mr. St. John Bullen, "On the Out-patient System in connexion with Asylums, and its further Development;" and Dr. J. Cumming Mackenzie will read "Notes on General Paralysis, Alcoholic Insanity, and allied Neuroses in the Celtic Highlander." Also Dr. Goodall will give a lantern demonstration on subjects connected with insanity. The names of six gentlemen will be submitted as candidates for election to the membership of the association. The members will dine together in the evening at the Adelphi Hotel. The next examination for the certificate in psychological medicine and for the Gaskell Prize will take place in July next.

THE VENTNOR CONSUMPTION HOSPITAL.—The annual meeting of the friends of this institution was held at the London office, Craven-street, Strand, on the 21st ult., and a satisfactory report was presented on the occasion. The hospital was designed to secure for phthisical patients those advantages which result from a pure atmosphere and separate treatment. The results, as recorded by the medical officers, are most encouraging. Thus of 747 patients who participated in the benefits of the institution during 1892, and excluding those (126) cases which were summarised in the report of the previous year, we have the following record:—Of patients very much improved, 74; of those much improved, 183; improved, 220; of those remaining in the same condition, 76; whilst 44 were worse and 22 died. In 76·7 per cent. of the cases improvement was manifest on leaving, whereas the result was unfavourable in but 10·6 per cent. The medical officers have received favourable accounts from patients who were treated in the hospital in 1891 with Koch's tuberculin, and whose condition, as testified to by competent observers, has been found to be perfectly satisfactory. As to the finances of the charity, the gross receipts for the year amounted to £13,504, and the expenditure to £11,836; leaving a good balance on the right side.

GREAT NORTHERN CENTRAL HOSPITAL.—The annual meeting of this medical charity was held on Feb. 24th in the out-patients' department of the hospital, Holloway-road. Mr. C. T. Murdoch, chairman of the Committee of Management, who presided, proposed the adoption of the report and congratulated the governors upon the fact that although the number of patients treated last year was considerably greater than that of those treated in 1891 the expenditure was a trifle less. He was pleased to announce that H.R.H. the Duke of York had kindly consented to preside at a festival dinner on May 18th next for the purpose of raising funds for the completion of the hospital. The entire cost of the new buildings, including furniture, would be about £30,000, of which £20,000 had yet to be raised. He trusted that the general public, in addition to the wealthy inhabitants of North London, would come forward and provide the money so that the new buildings might be opened free of debt. Mr. D. Marshall Lang seconded the motion, which was warmly supported by Mr. Burdett-Coutts, M.P., and unanimously agreed to. The committee having been elected for the ensuing year, votes of thanks were accorded to the various honorary officers of the hospital, and the proceedings terminated with a cordial vote of thanks to the chairman for presiding

FOOTBALL CASUALTY.—On Saturday last, in a game at Holbeck, the York centre three-quarter sustained a severe sprain of the ankle.

COMPLIMENTARY DINNER.—On Tuesday, Feb. 28th, the members of the United Hospitals Athletic Club, the United Hospitals Hare and Hounds Club and the United Hospitals Boxing Club entertained Mr. Kent Hughes at a complimentary dinner previous to his departure for Melbourne. Mr. J. H. Morgan, President of the Athletic Club, took the chair, and in proposing the toast of the evening referred to the many victories of Mr. Kent Hughes at the annual sports of the United Hospitals Athletic Club and to the great debt that Club owed him for his unselfish efforts on its behalf. He reminded his hearers that the Hare and Hounds and Boxing Clubs both owed their existence to Mr. Kent Hughes, and called on them to wish him all prosperity in his professional career. The toast was drunk with great enthusiasm, and Mr. Kent Hughes, in reply, said he hoped that all hospital athletes would unite to make the annual sports a success and keep up the name of the London hospitals in inter-club contests. Students from nearly all the London hospitals were present.

NOTES IN PARLIAMENT.

The Times of March 1st says it is believed that the Government will assent to Mr. Schwann's resolution dealing with the cultivation and sale of hemp drugs in India, which has the first place on Friday. Mr. Schwann's suggestion is that the Secretary of State for India should order a commission of experts to inquire into, and report upon, the cultivation of and trade in all preparations of hemp drugs in Bengal, the effect of their consumption upon the people of that Presidency and the desirability of the prohibition of their sale; not less than one-half of such commission to be composed of non-official natives of India.

Clare Infirmary Bill.

This Bill provides for the entire reconstitution of Clare Infirmary. It abolishes the present governing body and brings into existence a board of management consisting of representatives of each board of guardians in the county of Clare. In lieu of the present infirmary a public general hospital is to be established, to be called the Clare Hospital, and to be made available for the reception of patients residing in the county. The medical staff shall consist of such duly qualified surgeons and physicians as may be appointed by the Local Government Board, and shall be subject to the control of that Board and the board of management.

The Seamen's Provisions Bill.

When the second reading stage of this Bill shall have been reached, Mr. Alban Gibbs will, by way of amendment, move: "That no alteration in the law relating to seamen's provisions will be satisfactory which does not provide a separate scale for each trade and also for Lascar seamen, who will not touch European food, and of whom there were, by the Board of Trade return for the year ending Dec. 31st, 1891, 23,243 in the British mercantile marine."

The Medical Examination of Recruits.

In his report for 1892 the Inspector-General of Recruiting says that the examination of recruits by medical officers has been much more satisfactory, and their work has been reduced in those districts where they have taken most care in the instruction of the recruiters as to the method of conducting the preliminary examination. It is believed that this plan has not only conduced to economy, but has also made recruiting less difficult, as the would-be recruits resent being rejected by medical officers after a long railway journey, coupled, perhaps, with a trudge of a mile or more to and from the place of inspection. In 1892 the number of men rejected by the medical officers was 26,270, a number which represents 382 per 1000 of the men inspected. Of the 26,270, there were 13,760 rejected on account of various ailments and 12,510 on account of want of physical development.

Sanitary Registration Bill.

On Wednesday a Bill was introduced and read a first time in the House of Commons for the sanitary registration of dwelling-houses, schools, colleges, hospitals, asylums, workhouses, factories, workshops, hotels, lodging-houses and other buildings within the United Kingdom. The Bill is backed by Mr. Martin, Sir Algernon Borthwick, Dr. Cameron, Dr. Farquharson and Mr. Wootton Isaacson.

The Old Cemetery at Houghton-le-Spring.

In the House of Commons, on Thursday, Captain Fenwick asked the Home Secretary whether his attention had been called to the fact that, owing to the crowded state of the old cemetery at Houghton-le-Spring, it was impossible to carry out the proper burying regulations. Mr. Asquith replied that he had caused proper inquiries to be made, and if he found it necessary he would send down an inspector, who would make a full report on the state of things.

Accommodation for Infectious Diseases.

In the House of Commons, on Tuesday, a return was ordered on the motion of Mr. Johnson-Ferguson, "showing the area and population according to the last Census of every urban and rural sanitary district in England and Wales, and also showing, as regards every such district and every port sanitary district in England and Wales, whether the sanitary authority had on or before the 31st day of December, 1892, made special provision for any accommodation of the nature of an isolation hospital (other than in connexion with workhouses) for cases of infectious disease arising in their district, and, if so, giving the following further particulars:—1. Whether the accommodation has been provided (*a*) by the sanitary authority independently; (*b*) by the sanitary authority in combination with other authorities as a Joint Hospital Board; (*c*) by the sanitary authority in combination with other authorities under Section 131 of the Public Health Act, 1875; or, whether the sanitary authority had made any agreement or arrangement for the admission of patients into hospitals belonging to other local authorities or to private bodies. 2. Where the accommodation has been provided by the sanitary authority independently or in combination with other authorities: (*a*) description and area of site—where situated; (*b*) whether the hospital has been erected on plans approved by the Local Government Board, or whether it was a workhouse hospital transferred to the sanitary authority with the Board's sanction." The other information relates to the site, the number of beds, the cost and general arrangement of the hospital.

Cooking and Messing in the Army.

In the House of Lords, on Monday last, Lord Sandhurst explained, in reply to a question by the Earl of Strafford on the above subject, the improvements which are now being carried out at Aldershot and other centres in the system hitherto adopted in respect of cooking &c. in the army. In the opinion of officers of experience the proposed improved method will add greatly to the comfort and well-being of the soldier.

Middlesex County Council Bill.

In the House of Commons, on the 24th ult., Mr. Howard moved the second reading of this Bill. He said the first and second clauses were intended to remove certain disabilities which Middlesex alone, in contradistinction to other counties, laboured under with regard to the acquisition or refusal of land for infectious diseases purposes. An infectious diseases hospital had been placed in Middlesex against the wish of the local authority, and this, he contended, was a contravention of the principles which lie at the root of local government.—Mr. Pickersgill moved the rejection of the Bill, which, he said, was intended to prevent the Metropolitan Asylums Board from obtaining a site within the metropolitan area for the erection of a hospital for the treatment of infectious disease. He did not see why an exception should be made in favour of Middlesex with regard to this matter.—Colonel Hughes, Lord Hamilton and other speakers argued in the same sense.—Mr. H. Fowler said the Bill was an attempt on the part of the Middlesex County Council to alter, by means of a private measure, the public law. The Home Department and the Local Government Board had agreed that the Bill should not be allowed to pass. Finally, the second reading was negatived without a division.

Local Control of the Liquor Traffic.

On the 27th ult. the Chancellor of the Exchequer brought forward a Bill for the local control of the trade in intoxicating liquor. Mr. Bonsor took various exceptions to the Bill. Sir Wilfrid Lawson warmly supported the measure, as did Mr. M'Lagan, whilst several other members denounced it. The Bill was then read the first time.

The Health Office of Scotland.

Sir G. Trevelyan stated, in answer to a question on this subject, that the constitution of the Board of Supervision—which is, in fact, the Health Office of Scotland—is occupying the serious attention of the Government. He took occasion to pay a tribute to the energy and judgment with which the Board provided against the anticipated approach of cholera last year.

Proposed Cholera Ship on the Thames.

Mr. H. Fowler, in reply to a question put by Colonel Howard Vincent, said that the Commissioners of Sewers of the City of London had under consideration the provision of hospital accommodation for cholera patients, and had communicated with the Thames Conservancy on the subject of mooring a floating hospital in the river. That body, however, had not arrived at a decision on the matter, but would consider the question of the possibility of danger arising to the public health from the contiguity of such a hospital.

Foot-and-mouth Disease.

On the 23th ult. a question was put by Mr. Fellowes in reference to an outbreak of this disease at Hastings. Mr. Gardner said the affected animals were still alive, but were subjected to strict isolation; for, said he, it frequently happens that the slaughter of cattle so diseased is attended with greater risk of spreading the affection than if the animals were kept alive. In answer to another question, Mr. Gardner said that those who have to enter the buildings in which the animals are isolated have to use a special dress supplied for the purpose.

Police and Sanitary Regulations.

On the 1st inst. Mr. Herbert Gladstone moved that a committee be appointed to consider all private Bills promoted for the purpose of creating powers relating to police and sanitary regulations which deviated from the general law. The motion, after a brief discussion, was adopted.

The Value of Vaccination.

On Thursday Mr. Hopwood asked the Secretary of State for War whether his attention had been called to a statement that an outbreak of small-pox had occurred amongst the soldiers at Halifax Barracks, and that, on being detected, the men were at once removed to the hospital, and that since Saturday the soldiers generally had been confined to barracks; whether all the soldiers had been once or twice or more times vaccinated; and whether he was advised by the medical authorities that revaccination was a sure protection against small-pox. Mr. Campbell-Bannerman replied that his information was to the effect that five men were attacked by small-pox at Halifax and were removed to the civil hospitals. The troops were confined to barracks for three days after the outbreak. None of the men attacked had been revaccinated. As to the last question, he was advised by the medical authorities that in their opinion vaccination or revaccination was amply proved by statistics to be a valuable preventive of small-pox and when the disease did occur it modified its severity and reduced the mortality.

The Hemp Drug Trade

Mr. Russell, in reply to Mr. Caine, said that the Secretary of State proposed to request the Viceroy to appoint a Commission for the pur-

pose of inquiring into and reporting upon the hemp drug trade in Bengal, and he would be glad if the result of their inquiry was to show that further restrictions could be placed upon the sale and consumption of these drugs. The Commission would be composed in part of non-official natives of India. The Secretary of State would give instructions to ensure that the inquiry should be as thorough and complete as possible, but he did not consider it desirable to interfere with the discretion of the Commission as to the methods of procedure which they might think best to adopt.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARCLAY, W. M., F.R.C.S., M., L.R.C.P. Lond., has been appointed Surgeon to the Bristol General Hospital, vice Dobson.

BENTHAM, A. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Abram Sanitary District of the Wigan Union.

BERNARD, C. J., L.A.H., L.M. Dubl., has been appointed Medical Officer of the Nottingham Convalescent Homes.

BRAYTON, THOMAS, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Hindley Sanitary District of the Wigan Union.

BROWNE, H. E., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Molony, New South Wales.

BUTLER, W. J., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of the Nottingham Convalescent Homes.

COLLIER, M. P. M., M.S. Lond., F.R.C.S., has been appointed Surgeon to the National Hospital for Diseases of the Heart &c., Soho-square.

CRIBB, A. W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Superintendent of the Newcastle Hospital, New South Wales.

DOBSON, NELSON C., F.R.C.S., has been appointed Consulting Surgeon to the Bristol General Hospital on resigning the office of Surgeon.

DOYLE, H. M., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of the United Friendly Societies' Dispensary at Newcastle, New South Wales.

EATOUGH, ROBERT, M.B., M.S. Aberd., has been appointed a District Medical Officer for the Township of Saddleworth.

EDMOND, W. R., M.B., M.S. Edin., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Clew Magna Sanitary District of the Clutton Union.

ESLER, A. W., M.D., Ch.M. Irel., has been appointed Public Vaccinator for Heathcote, Victoria, Australia, vice Clark, resigned.

FORRESTER, R. A., M.B., Ch.M., Edin., has been appointed Public Vaccinator at Wycheproof, Victoria, Australia.

GARDNER, W. T., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health for the Aston Urban Sanitary District of the Brentford Union, vice Prowse, resigned.

GORDON, WILLIAM, M.B., B.C. Cantab., M.R.C.P. Lond., has been appointed Physician to the Exeter Dispensary.

GRIFFITHS, G. B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Sutton-upon-Trent Sanitary District of the Southwell Union.

GUNST, C. W., L.R.C.P., Ch.M. Edin., L.F.P.S. Glasg., has been appointed Health Officer for the Shire of Euroa, Victoria, Australia, vice Tuthill, resigned.

HALLETT, C. H., M.B., M.S. Glasg., has been appointed Medical Officer for the Bradninch Sanitary District of the Tiverton Union.

HERRIOT, STUART, L.R.C.P., L.R.C.S. Edin., has been appointed Government Medical Officer and Vaccinator for the District of Moree, New South Wales, vice Lillie, resigned.

HODGES, JAMES, M.R.C.S., has been appointed Assistant Medical Officer to the Suffolk General Hospital.

INGLIS, H. McC., M.B., Ch.M. Edin., has been appointed Public Vaccinator for the Districts of Malvern and Hororata, New Zealand.

JORDAN, J. F., M.B., B.Ch. Irel., F.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the Birmingham and Midland Counties Hospital for Women.

KANE, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the United Friendly Societies' Dispensary at Newcastle, New South Wales, vice Elliott, resigned.

KILNER, JOHN, F.R.C.S., M., has been appointed Consulting Medical Officer to the Suffolk General Hospital.

LITTLE, WM., M.D., Ch.M. Glasg., D.P.H. Camb., has been appointed Public Vaccinator for the District of Amuri, New Zealand.

LOVETT, S. R., L.R.C.P. Edin., L.R.C.S. Irel., L.S.A. Lond., Medical Officer of Health, St. Giles' District, has been appointed Medical Officer of Health for Lincoln's Inn.

MCCARTHY, HENRY, L.R.C.S Irel., L.A.H., has been appointed Public Vaccinator for Tatura, Victoria, Australia.

MACKAY, WM., M.B., Ch.M. Edin., has been appointed Health Officer and Public Vaccinator for the district of Heywood, Victoria, Australia.

MARTIN, WILLIAM, M.A., M.B., B.S. Durh., has been appointed House Surgeon to the West Herts Infirmary, vice Shaw, resigned.

MORTON, C. A., L.R.C.P. Lond., F.R.C.S., M., has been appointed Assistant Surgeon to the Bristol General Hospital.

MUNDEN, CHARLES., M.R.C.S., has been reappointed Medical Officer for the Third Ilminster Sanitary District of the Chard Union.

PATTIN, H. COOPER, M.A., D.P.H., M.B. Cantab., has been appointed Medical Officer of Health for the City of Norwich.

PAUL, G. W. F., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Convalescent Home at Sandgate, Queensland.

PEARE, H. R., L.R.C.P., L.M. Irel., has been appointed Government Medical Officer and Vaccinator for the district of Nymagee, New South Wales, vice Colpe, resigned.

RAMSDEN, H. K., M.B., B.S. Victoria Univ., has been appointed a District Medical Officer for the Township of Saddleworth.

RHODES, G. F., M.B., M.S. Edin., has been appointed Medical Officer for the Huddersfield North Sanitary District of the Huddersfield Union.

RUSSELL, F. R., M.D., C.M. Edin., has been appointed Honorary Surgeon to the National Fire Brigades' Union.

SELLAR, A., M.B., Ch.M. Aberd., L.R.C.S. Irel., has been appointed Public Vaccinator for Lorquon, Victoria, Australia.

SMITH, PATRICK, M.D. Sydney, has been appointed Medical Officer for Lepers in the Lazaret-on-Stradbroke Island, Queensland.

SMITH, V. A. I., L.R.C.S., L.K.Q.C.P. Irel., has been appointed Government Medical Officer and Vaccinator for the district of Burrowa, New South Wales.

STOKER, JOHN WM., L.R.C.P., L.R.C.S. Edin., L.F.P. & S. Glasg., has been appointed Certifying Surgeon under the Factories Act for the District of Rainham, Essex; also Medical Examiner for Post Office Insurance for the same District.

VINRACE, J. H., M.B. Lond., M.R.C.P., has been appointed Physician to the National Hospital for Diseases of the Heart &c., Soho-square.

WOODFORDE, W. S. E., M.B., Ch.M. Edin., has been appointed Government Medical Officer at Goondiwindi, Queensland, vice Magill, resigned.

YOUNG, MEREDITH, M.B., C.M. Edin., has been appointed Medical Officer of Health for the Brighouse Urban Sanitary District and also for the Rastrick Sanitary District of the Halifax Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOARD OF WORKS FOR THE POPLAR DISTRICT.—Medical Officer of Health for the Poplar and Bromley parishes. Salary £400 per annum. Apply to the Clerk to the Board, Offices, 117, High-street, Poplar.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Board and residence, and allowance for washing provided. (Apply to the Secretary, 24, Finsbury-circus, E.C.)

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY, Wakefield.—Junior House Surgeon (unmarried). Honorarium £40 per annum, with board, lodging and washing.

FARRINGDON GENERAL DISPENSARY, Bartlett's-buildings, Holborn-circus, E.C.—Surgeon.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Resident Medical Officer. Salary commencing £130, with £20 allowed for servant, unfurnished house, rent, rates and taxes free with supply of gas and coal. (Apply to the Honorary Secretary, 68, Aldermanbury, E.C.)

KING'S COLLEGE, London.—Professorships of Botany and Vegetable Physiology.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

LONDON HOSPITAL, Whitechapel-road, E.—Surgical Registrarship. Salary £100 a year.

MANCHESTER ROYAL INFIRMARY (Monsall Fever Hospital.)—Assistant Medical Officer at Monsall Fever Hospital for twelve months; unmarried. Salary £100 per annum, with board and residence.

NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—Dispenser, unmarried. Salary £60, with board and residence.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N., for six months. Salary £40 per annum, with rations, furnished apartments and washing in the Infirmary. (Apply to the Medical Officer, 204, Hoxton-street, London, N.)

ROYAL COLLEGE OF PHYSICIANS, Pall-mall East, S.W.—Milroy Lecturer.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES &C., Henrietta-street, Covent-garden.—House Surgeon for six months. Honorarium 25 guineas, board, lodging and washing.

ST. SAVIOUR'S UNION, Surrey.—Temporary District Medical Officer for the Seventh District. Salary at the rate of £150 per annum, inclusive of all extra fees, excepting those in respect of the quarterly returns of lunatics. (Apply to the Clerk, John-street West, Blackfriars-road, S.E.)

STAMFORD, BUTLAND, AND GENERAL INFIRMARY.—House Surgeon and Secretary, for two years. Salary £100 a year, with board, lodging and washing.

THE YORKSHIRE COLLEGE, Leeds.—Demonstrator of Anatomy.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided.

YORK COUNTY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, apartments and washing.

Births, Marriages and Deaths.

BIRTHS.

CHAPMAN.—On Feb. 25th, at Weymouth-street, Portland-place, W., the wife of Charles W. Chapman, M.D., M.R.C.P., of a son.

MACKAY.—On Feb. 23rd, at Northumberland-place, North Shields, the wife of W. Murray Mackay, L.R.C.P., L.R.C.S., L.F.P.S.G. &c., of a daughter.

PAUL.—On Feb. 27th, at Fenne-street, Loughborough, the wife of Reginald Paul, Surgeon, of a son.

SANSOM.—On Feb. 25th, at Lawn House, Quex-road, West Hampstead, the wife of H. Arthur Sansom, M.D. Lond., of a daughter.

SCOTT.—On Feb. 22nd, at Warwick-road, Maida-vale, W., the wife of W. Jerman Scott, M.B., of a daughter.

WINN.—On Feb. 24th, at 121, King Edward-road, South Hackney, N.E., the wife of Thomas Cromwell Winn, M.R.C.S., of a daughter.

MARRIAGES.

BAYS—SMYTH.—On Feb. 23rd, at St. Simon's, West Kensington, by the Rev. R. Handcock, James T. Bays, M.D. Lond., 77, Finchley-road, N.W., to Flora, second daughter of the late A. Smyth, Creighton, Victoria, and granddaughter of the late Rev. John Cameron, M.A., Edderton, Ross-shire.

SEAGROVE—FINDLAY.—On Feb. 23rd, at St. Columba's, Pont-street, Belgravia, Dr. H. Aylward Seagrove, of Station-road, Willesden-green, to Margaret Stephenson, third daughter of the late James Findlay, J.P., formerly of Westfield, Greenock.

DEATHS.

ANDERSON.—On Feb. 28th, at 41, Wimpole-street, W., of pleuro-pneumonia, after a very short illness, James Anderson, M.D., F.R.C.P., aged 40 years.

BUTLER.—On Feb. 23rd, at Manor Lodge, Beeston, near Nottingham, James Butler, M.R.C.S., aged 74.

COLT.—On Feb. 26th, suddenly, at Rock House, Maidencombe, St. Mary Church, Sir Thomas Archer Colt, Bart., M.D., aged 77.

ENGLISH.—On Feb. 24th, at his residence, Aislaby Lodge, Whitby, Arthur William English, M.R.C.S., J.P., in his 81st year.

HOCTER.—On Oct. 13th, 1892, on board the *Pongola*, near Durban, W. H. de Burgh Hocter, M.B., son of the late Rev. R. P. Hocter, of Carnlough, Belfast, aged 40.

SHERWOOD.—On Feb. 22nd, at Prospect-hill, Whitby, Yorkshire, Eleazar Sherwood, M.D.; born May 9th, 1824.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

BOOKS ETC. RECEIVED.

ALCAN, FELIX, Paris.
Manuel de Petite Chirurgie, de A. Jamain Septième Edition. Par F. Ferrier et M. Péraire. 1893. pp. 782.

BAILLIÈRE, TINDALL & COX, King William-street, Strand, London.
Practical Pharmacy for Medical Students. By A. Campbell Stark. 1893. pp. 205. Price 3s. 6d.
Notes on Medicinal Remedies. By J. B. Stephenson. 1893. pp. 72. Price 1s. 6d.

BLAKISTON, SON & Co., Philadelphia.
Handbook of Materia Medica, Pharmacy and Therapeutics. By S. O. L. Potter, M.D., M.R.C.P. Lond. Fourth Edition. 1893. pp. 781.

BUSH, R. J., Fleet-street, London
Lectures to Plumbers. By J. Wright Clarke, Plumber. Illustrated 1893.

CHURCHILL, J. & A., New Burlington-street, London.
A Treatise on Human Anatomy. By various Authors. Edited by Henry Morris, M.A., M.B. Lond. Illustrated. 1893. pp. 1310.

KEGAN PAUL, TRENCH, TRÜBNER & CO., Charing-cross-road, London, W.C.
B. Bradshaw's Dictionary of Bathing-places and Climatic Health Resorts. With several Maps. 1893. Price 2s. 6d.

LEWIS, H. K., Gower-street, London.
Diseases of the Skin; their Description, Pathology, Diagnosis and Treatment. By H. R. Crocker, M.D. Lond. Second Edition. Illustrated. 1893. pp. 939.
A Pharmacopœia for Diseases of the Skin. Edited by Jas. Startin, M.R.C.S. Third Edition. 1892. pp. 39. Price 2s. 6d.

OLIVER & BOYD, Edinburgh.
Cheyne-Stokes Respiration. By George A. Gibson, M.D., D.Sc., F.R.C.P. 1892. pp. 133. Price 5s.

RUEFF ET CIE., Paris.
Traitement de la Syphilis. Par Alfred Fournier. pp. 600.

SCOTT, WALTER, Warwick-lane, Paternoster-row, London.
The Germ-Plasm; a Theory of Heredity. By A. Weismann. Translated by W. N. Parker, Ph.D., and Harriet Rönnfeldt, B.Sc. Illustrated. 1893. pp. 477. Price 6s.

SMITH, ELDER & Co., Waterloo-place, London.
Saint Bartholomew's Hospital Reports. Edited by W. S. Church, M.D., and W. S. Walsham, F.R.C.S. Vol. XXVIII. 1892.

SWAN SONNENSCHEIN & Co., Paternoster-square, London.
How Nature Cures; comprising a New System of Hygiene and the Natural Food of Man. By Emmet Densmore, M.D. pp. 413.

THE SCIENTIFIC PRESS, Strand, London, W.C.
Mental Nursing; or, Lectures for Asylum Attendants. By W. Harding, M.B. Edin., M.R.C.P. Lond. 1893. pp. 131. Price 2s. 6d

WOOD, WM., & Co., New York.
Handbook of Insanity, for Practitioners and Students. By Dr. T. Kirchhoff. Illustrated. 1893. pp. 362.

On Serpent-Worship and on the Venomous Snakes of India; by Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S. (The Victoria Institute, Adelphi-terrace, London).—Observations on the Prevalence of Cancer and its Increase; by W. Roger Williams, F.R.C.S.; (reprint) (John Heywood, London and Manchester).—The Friend of China, February, 1893 (P. S. King & Son, Westminster, S.W.): price 3d.—Certifying Surgeon's Daily Report Book (T. H. Hayhurst, Radcliffe, Manchester); price 2s.—The Johns Hopkins Hospital Reports: Report in Pathology, II. (The Johns Hopkins Press, Baltimore, 1892).—Die Cholera-Epidemie in Hamburg, 1892; von Dr. Ferdinand Hueppe und Else Hueppe (A. Hirschwald, Berlin, 1893).—Margate as a Health Resort; by H. E. Crook, M.D. Lond., F.R.C.S.—Tuberculosis or Flesh-eating a Cause of Consumption; by Josiah Oldfield, M.A., B.C.L., Barrister-at-Law (The Vegetarian Publishing Office, London, E.C.); price 6d.—Magazines for March: Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 2nd, 1893.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 24	29·35	E.	34	33	43	38	33	..	Overcast
,, 25	29·21	N.E	32	..	58	43	31	..	Bright
,, 26	29·19	S.W.	42	41	57	47	32	·25	Raining
,, 27	29·36	S.W.	37	36	47	41	34	·27	Hazy
,, 28	29·74	N.	37	35	67	46	35	·47	Hazy
Mar. 1	29·66	S.W.	45	44	74	57	37	·06	Raining
,, 2	29·91	N.W.	49	47	81	56	44	·12	Bright

Medical Diary for the ensuing Week.

Monday, March 6.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. A. S. Morton: Ocular Injuries.—101, Gt. Russell-st.: 8 P.M., Dr. Galloway: The Nervous System.—Parkes Museum (Margaret-st., W.): 3.30 P.M., Dr. Parkes: Communicable Diseases, Disinfection.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. J. W. Bond: Morbid Appearances of Membrana Tympani.

MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council. Ordinary Meeting, 8.30 P.M. Mr. Buckston Browne: Suprapubic Prostatectomy.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. G. W. Watson (Edinburgh): Pathological Conditions of the Dental Pulp (with Lantern Slides). Casual Communications by Mr. W. Herne, Mr. J. T. Fripp, and Mr. H. Baldwin.

Tuesday, March 7.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 1.45; Saturday, 9.15.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Brain.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Dr. Payne: Lupus and Scrofuloderma.—Bethlem Hospital: 2 P.M., Dr. H. Corner: Insanity with Organic Brain Disease. 101, Gt. Russell-st.: 8 P.M., Dr. Herman: Leucorrhœa.

ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. W. D. Halliburton: The Chemical Physiology of the Animal Cell. (Goulstonian Lecture.)

PATHOLOGICAL SOCIETY OF LONDON.—Continued Discussion on Mr. Jackson Clarke's communication on the Pathology of Cancer and Sarcoma. Observations on "Psorosperms" in Cancerous Growths by Dr. Woodhead, Mr. Boyce, and Dr. Ruffer. Card Specimens by Dr. R. G. Hebb and Dr. Lee Dickinson.

Wednesday, March 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. K. Fowler: Cases of Mitral Disease.—Royal London Ophthalmic Hospital: 8 P.M., Mr. W. Lang: Diseases of Iris.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Mr. F. G. Harvey: Stricture of Œsophagus.

HUNTERIAN SOCIETY.—8.30 P.M. Pathological Evening. Dr. Fred. J. Smith: Tuberculosis of Kidney, Ureter and Bladder.—Mr. T. H. Openshaw: Sarcoma of Head of Humerus involving Scapula removed by Amputation of entire Upper Extremity.—Dr. F. Charlewood Turner: Hydronephrotic Atrophy of Kidneys (two cases). Mr. C. J. Symonds will also exhibit specimens.

Thursday, March 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. F. W. Wagstaffe: Diseases of Bone.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Beevor: Cases of Cerebral Disease.—London Throat Hospital (Gt. Portland-st.): 8 P.M., Dr. Woakes: Tinnitus and Vertigo.—Central London Sick Asylum: 5.30 P.M., Sir Wm. Roberts: Demonstration on Urinary Deposits.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. W. D. Halliburton: The Chemical Physiology of the Animal Cell. (Goulstonian Lecture.)
NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. A Lantern Demonstration of Protozoa. Exhibits by Mr. J. McMunn, Mr. F. O. Smith, Dr. R. W. Burnet, Dr. Hugh Woods, Mr. C. B. Lockwood, Dr. L. Remfry, Dr. B. Watson, Dr. A. W. Wilson, Mr. W. H. Day, and Mr. R. Johnson.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Mr. Silcock: A case of Conical Cornea.—Mr. E. Treacher Collins: Microphthalmos.—Mr. J. Tatham Thompson: Lodgment of a Fragment of Steel in the Vitreous; peculiar Track.—Dr. Abercrombie: Sequel to a case of Proptosis with Intracranial Bruit (with specimen). And other papers.

Friday, March 10.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.
CANCER HOSPITAL (Fulham-road, S.W.).—4 P.M. Mr. F. Bowreman Jessett: Uterine Carcinoma and its Treatment.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. K. Fowler: Cases of Aortic Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Typhoid Fever, Diphtheria, Rabies and Tetanus (Sections and Cultivations).
CLINICAL SOCIETY OF LONDON.—Mr. Makins: A Note on the Prognosis of Sacro-Iliac Disease, with three illustrative cases.—Mr. Raymond Johnson: A case of Lympho-Sarcoma of Tonsil removed by External Incision with preliminary Ligature of External Carotid Artery. Mr. H. Allingham: A case of Intestinal Obstruction of six weeks' duration: Inguinal Colotomy; Removal of the Malignant Growth from the Inguinal Incision.—Dr. Hale White: Two exceptional cases of Peripheral Neuritis, one Septicæmia, the other due to Lead Poisoning and presenting Unilateral Faucial Paralysis and other rare symptoms.

Saturday, March 11.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Lunacy Law.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

SALIES-DE-BÉARN.

A CORRESPONDENT writes to draw our attention to the merits of Salies-de-Béarn as a spa and health resort. This little-known watering-place is distant twelve hours' journey from Paris on the line to Pau. It derives its name from its salt springs, which are said to contain seven times more salt than sea-water. They also contain bromine and iodine. Their density is 1·101 and their temperature 14° C. to 15° C. The supply is equal to 1000 hectolitres in twenty-four hours. The waters are recommended in scrofulous affections of the glands, joints, bones, eyes &c. They are said to be especially beneficial to children. Salies is a small town of 6000 inhabitants. It is picturesquely situated and interesting. The new town contains many handsome buildings and villas, grouped round the bathing establishment, which was rebuilt in 1887. The walks and drives are interesting, and Pau, Bayonne, Biarritz, the Basque country, the Pyrenees and the Spanish frontier are easily accessible.

MEDICAL ADVERTISING NEAR SOUTHAMPTON.

IT is curious to notice the modesty of medical advertisements as illustrated in the following handbill. We do not here comment on the ethical aspects of the "one mark only" vaccination promised for one shilling. But this is matter for more careful notice.

"The London Dispensary (Eastleigh Branch), 1, Prospect-terrace, Desborough-road, Eastleigh. This branch will be open on Tuesday, February 21st, 1893. This surgery has no connexion with any other in Eastleigh. It is open for the purpose of enabling the people of this rapidly increasing town to be able to have the best advice and medicine from a fully qualified and experienced medical man. No unqualified assistant kept. All patients will be visited at their own homes and receive advice and medicine at the surgery from the medical officer in charge, who is a fully qualified physician, surgeon and accoucheur. Hours of consultation: Mornings, 9 A.M. to 11 A.M; afternoons, 2 P.M. to 3 P.M.; evenings, 6 P.M. to 9 P.M. Sundays, mornings, 9 A.M. to 10 A.M.; evenings, 7 P.M. to 9 P.M. Fees: Advice and medicine, 6d.; visit and medicine, 1/-; vaccination with pure calf lymph, one mark only, 1/-; midwifery, from 10/6."

Devotee asks us for some particulars to be observed and arrangements to be provided in planning and building infectious diseases or small-pox hospitals for about twelve or eighteen patients, with administrative block and disinfector. In the question the purpose of the proposed building should have been stated—whether for permanent or temporary use. Dr. Thorne Thorne's report is the best and most complete account of the infectious hospitals of Great Britain. Plans of small temporary hospitals for infectious diseases have been circulated by the Local Government Board and an application for a copy would doubtless receive attention.

INSOLUBLE TABLOIDS.

To the Editors of THE LANCET.

SIRS,—A fact has just come under my notice which I think should be brought before the profession, and I should like to ask whether other practitioners have observed any similar instances. A typhoid fever patient has been taking tabloids of quinine—two grains in each—three times a day at first and lately four times. Three days ago I discovered in one stool two tabloids—whole, but slightly enlarged—and I have found one and pieces of others each day since. This is the seventeenth day, as far as the data of motion can be fixed, and there has been no diarrhœa, the bowels having acted once each day after an enema. In view of the number of tabloids of various kinds that are used now, it appears to me a very serious matter if they are liable to pass through the stomach and intestines unaltered.—I am, Sirs, yours truly,

Woodford-green, Feb. 15th, 1893. WILLIAM G. GROVES.

"ROUGH NOTES ON REMEDIES."

To the Editors of THE LANCET.

SIRS,—Would Dr. Murray kindly say whether the drop of uncertain size or the standard minim is meant in his valuable notes on the use of arsenic? I am, Sirs, your obedient servant,

Davos Platz, Switzerland, Feb. 27th, 1893. WM. R. HUGGARD.

MEDICAL ADVERTISING IN JAMAICA.

THE following is an extract from the *Daily Gleaner* of Kingston, Jamaica:—

"We understand that Dr. A. E. Maynier, M.D., C.M. Cantab., L.S.A., F.O.S.Lond., who was lately a medical officer at the Public Hospital and who was appointed medical officer for Porus, has tendered his resignation from the medical service of the island. His resignation has been accepted. He will return to private practice and will open two dispensaries—one at his residence, No. 27, Sutton street, for the treatment of his own private patients, and the other at 29, Orange-street, on the Parade, where he will attend from 6 A.M. to 7 P.M. the poorer class of patients at extremely moderate rates."

The following card shows that honours and medals do not always secure a man against most unprofessional methods:—

"Dr. J. Josiah Edwards, C.M., M.D., L.R.C.S.E., L.R.C.P.E., L.M. R.C.P.E., L.F.P.G., L.F.S.G., Edinburgh, Scotland; double Gold Medallist (1891), only Silver Medallist, highest Double Prizeman, scholarship winner and highest honour graduate, Bishop's University. Office hours: 8 to 10 A.M., 1 to 4 P.M., 8 to 11 P.M. 19, King-street, Spanish Town, Jamaica."

IN our notice of Messrs. Parke, Davis and Co.'s "diurnules" in our issue of the 18th ult. we omitted to publish the London address of this firm—namely, 43 and 44, Holborn Viaduct, E.C.

During the week marked copies of the following newspapers have been received:—*Daily Telegraph, South Molton Gazette, Bury Free Press, West London Press, The Rock, Galloway Gazette, Guernsey Star, Yorkshire Post, The London, Liverpool Daily Post, The Electrical Engineer, Western Daily News, South Wales Daily News, Leicester Daily Post, Scottish Leader, Leeds Mercury, Bristol Mercury, Reading Mercury, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, City Press, Food, Drugs and Drink Journal, Guy's Hospital Gazette, Local Government Journal, Surrey Advertiser, Australian Medical Journal, Australian Medical Gazette, West Middlesex Advertiser, Loughborough Monitor, Scotsman, Public Opinion, Builder, Architect, Record, Sunday Times, Pioneer Mail, Times of India, Le Temps (Paris), Worcester Echo, Kentish Mail, Coventry Herald, West Wilts Herald, Swindon Advertiser, Devizes Gazette, Citizen, Sanitary Record, Bognor Observer.*

Communications, Letters &c. have been received from—

A.—Dr. Adamson, Fence Houses; Dr. H. E. Armstrong, Newcastle-on-Tyne; Mr. R. R. Anderson, Carmarthen; Mr. C. Allen, Kilburn; Apis, London; Antiseptic, London.

B.—Dr. M. N. Byrn, York; Dr. J. F. Bullar, Southampton; Dr. Bagshawe, St. Leonards-on-Sea; Mr. C. S. Bowker, Newport; Mr. A. E. Broster, Wirksworth; Mr. A. H. Benson, Somerset; Mrs. Blamfried, London; Mr. S. J. Brooks, Manchester; Mr. C. Birchall, Liverpool; Messrs. P. Blakiston, Son and Co., Philadelphia; Messrs. Barker and Co., London; Bangor City Mineral Water Co.

C.—Mr. G. W. Cross, Sudbury; Mr. E. Crutchloe, Westminster; Mr. H. Clinton, Nottingham; Mr. T. J. Croke, Beverley; Mr. B. Culpeck, Croydon; Messrs. Coxeter and Son, London; Messrs. Christy and Co., London; Messrs. F. and C. Campbell, London; Messrs. Crossley, Moir and Co., London; Chichester Infirmary; Cortland Wagon Co., London; Clayton Hospital, Wakefield.

D.—Mr. G. Duncan, Berlin; Mr. A. E. Y. Dyas, Shropshire; Mr. W. H. Davies, Newbridge; Devotee.

E.—Messrs. Evans and Wormull, London; E. P., London; E. C., Forest-hill.

F.—Mr. C. Fuge, Taunton; Messrs. Ferris and Co., Bristol; Felix, London; Forrester, London.

G.—Dr. S. Guttmann, Berlin; Mr. W. T. Grant, London; Mr. Chas. N. Graham, London; Messrs. Griffin and Co., London; Messrs. Gautier Bros., Thirsk; Miss G., Easingwold.

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M.—Dr. J. D. Malcolm, London; Mr. H. Maule, London; Mr. G. H. Morley, Birmingham; Mr. M. H. Margrave, Newton Abbot; Mr. J. McMurtrie, Glasgow; Mr. J. McDonald, jun., New York; Mr. McGillivray, Liverpool; Mr. Biddulph Martin, London; Messrs. Maythorn and Son, Biggleswade; Manchester Royal Infirmary; M.D., Yorks; Madden, London; Maltine Co., Bloomsbury.

O.—Messrs. Orridge & Co., London.

P.—Dr. G. Vivian Poore, London; Dr. Alfred Parkin, Hull; Dr. T. P. Prout, New Jersey; Mr. Oliver Pemberton, Birmingham.

R.—Lord Rowton, London; Dr. Rochard, Paris; Surg.-Capt. J. A. Raye, Banbury; Mr. C. Robbins, London; Reginaris Co., London; The Registrar, R.C.S.I.; Royal College of Physicians, London.

S.—Dr. T. G. Stevens, London; Dr. A. E. Armand Semple, London; Dr. Andrew Smart, Edinburgh; Dr. F. Squoir, Copenhagen; Dr. E. Mansell Sympson, Lincoln; Dr. S. A. K. Strahan, Northampton; Dr. W. J. Sinclair, Manchester; Mr. T. Smith, London; Mr. Jas. Swinburne, Wimbledon; Messrs. Secar, Haaluck and Co., London; Messrs. Salamon and Co., Essex; Messrs. Street and Co., London.

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V.—Mr. J. W. Vickers, London.

W.—Dr. Alex. Williams, Colchester; Dr. Whitelegge, Wakefield; Dr. E. F. Willoughby, London; Mr. J. R. Whitaker, Edinburgh; Mr. A. P. Walters, New Swindon; Mr. W. Williams, St. David's; Mr. J. S. Wood, London; Miss C. J. Wood, London; Miss E. Wright, Southall; Messrs. J. Wright and Co., Bristol; Messrs. Willing and Co., London; Messrs. White, Druce and Co., London; Wire Wove Waterproof Co., London.

X.—X. Y. Z., London.

Letters, each with enclosure, are also acknowledged from—

A.—Assistant, London.

B.—Dr. F. Bond, Tunbridge Wells; Dr. E. Beck, Mareke-by-Sea; Dr. W. M. Ball, Hounslow; Dr. L. S. Beale, London; Mr. J. Beckton, London; Mr. J. H. Breach, Newbury; Mr. R. J. Bedford, Kegworth; Mr. F. T. Bennett, Bow; Mr. Beant, Newtown; Mr. H. Blackburn, Nagasaki, Japan; Messrs. Brand and Co., London; Messrs. Benson and Co., London.

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D.—Dr. W. H. Day, London; Dr. A. C. Dixey, London; Mr. W. H. Dolamere, London; Mrs. Danby, Leicester; Delta, London; *Daily Telegraph*, Sheffield.

E.—Dr. D. G. Evans, Anglesey; Mr. J. R. Evans, Dowlais; Mr. G. M. Edwards, Ealing; Messrs. Eason and Son, Dublin; Easy, London; Exalgine, Brixton; Excelsior, London.

F.—F. C., Shepherd's Bush; Forceps, London; F.R.C.S., London.

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N.—Messrs. Negretti and Zambra, Holborn.

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P.—Probe, Hackney; P., London; P. S., Burnley.

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T.—Mr. F. Treves, London; Dr. D. Turner, Edinburgh; Dr. Taylor, Notts; Dr. F. Trombetta, Messina; Mrs. Tyte, Minchinhampton; T. W., London; Theta, London; Terebene, London.

U.—Uto, London.

W.—Dr. Wade, Melrose; Mr. Whateley, Birmingham; Mr. D. B. Walkington, Belfast; Mr. J. E. Williams, Llanfyllin; Messrs. Whitworth and Stuart, Manchester; Messrs. Warden and Co., Hendon; Messrs. Wilson and Blessley, London; W. H. B., London.

X.—X. M., London.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.